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**Governance Inertia & Performance in
a Micro-sized Single Desk Seller**

A 120 point thesis presented in partial
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Master of Management

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New Zealand

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ABSTRACT

Single Desk Seller (SDS) firm structures dominate the agribusiness sector in many developing countries, and were created to resolve export market failure and achieve performance efficiency and effectiveness. Many of these SDSs are also state owned enterprises and have been perceived to be inefficient and a drain on the public purse, as well as no longer having a *raison d'être* in the face of the World Trade Organization's anti-competition open markets policies. However, unlike in developed countries, SDSs are likely to remain a significant feature in small developing countries due to their inherent problem of small scale and undeveloped equity markets. It therefore beholds researchers and practitioners to correct inefficiencies of these structures in order to achieve optimal performance. The Arrowroot Industry Association, with a record of disastrous performance makes an ideal case to explore this governance-performance relationship. A holistic case study research methodology was used to carry out this study

The main finding was that the governance structure of the Arrowroot Industry Association (AIA) was unresponsive to and did not co-evolve with its environment over the last (20) twenty years. As a result it increasingly became an inefficient mechanism for solving governance according to the normative prescriptions of property rights, transactions cost, agency, resource based view, resource dependency theories, stakeholder, and stewardship theories. Consequently, and despite having a rare and valuable starch product, the AIA was unable to meet demand or secure sufficient rents from the value chain to meet the revenue objectives of itself or of its members.

The most significant causes of inertia in the AIA's strategy and structure were caused by two exogenous variables (a fixed legislation and significant political influence in the strategic process), and two endogenous variables (poor cognitive ability of management and directors and the limiting effects of its eroded resource base). The combination of poor performance and inertia of the AIA over the years resulted in various forms of escalating commitments, debt accumulation and a shrinking supply base upstream as producers sought alternative means of income. Furthermore, the absence of markets for managerial talents, corporate control and arrowroot production, harvesting and processing technologies restricted alternatives available to the AIA of Government in resolving the perceived problems.

Research implications and recommendations for the AIA are subsequently discussed. The major recommendations proposed to reverse the performance problem of the AIA were (1) tighter vertical integration of the AIA to internalise of downstream inefficiencies, (2) efficient allocation of property rights along the entire value chain, (3) clearly defined roles and boundaries for key stakeholders, (4) increasing managerial, technological and financial capacity, and (5) reducing Government control by making influence-cost significantly prohibitive.

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TABLE OF CONTENTS

ABSTRACT	II
LIST OF FIGURES	VII
LIST OF TABLES	IX
1 INTRODUCTION	1
1.1 PROBLEM STATEMENT	1
1.2 RESEARCH OBJECTIVES AND QUESTIONS	4
1.3 PURPOSE AND RELEVANCE AND AUDIENCE	4
1.4 UNIT OF ANALYSIS AND BOUNDARIES	5
1.5 METHODOLOGY.....	5
1.6 LIMITATIONS	6
1.7 THESIS OUTLINE	6
2 LITERATURE REVIEW	8
2.1 THEORETICAL LITERATURE.....	8
2.1.1 <i>Introduction</i>	8
2.1.2 <i>Strategy</i>	8
2.1.3 <i>Governance Structure – Definition</i>	15
2.1.4 <i>Governance Theories</i>	16
2.1.5 <i>Governance Mechanisms</i>	22
2.2 EMPIRICAL FINDINGS	35
2.2.1 <i>Strategy</i>	35
2.2.2 <i>The Governance - Performance Relationship</i>	37
2.2.3 <i>Boards</i>	39
2.2.4 <i>Supply Chain Governance</i>	42
2.2.5 <i>Financing strategy</i>	44
2.2.6 <i>Strategic Management in Developing Economies</i>	45
2.2.7 <i>Privatisation</i>	46
2.3 SUMMARY AND INTEGRATED THEORETICAL FRAMEWORK.....	47
3 RESEARCH SETTING – THE CONTEXT	51
3.1 INTRODUCTION.....	51
3.2 ST. VINCENT AND THE GRENADINES	51
3.3 THE AIA PRIOR TO 1976.....	52
3.4 AIA GOVERNANCE AS PRESCRIBED BY ACT 20 OF 1976.....	54
3.4.1 <i>Functions/Objectives of the AIA</i>	54
3.4.2 <i>Vision/Mission Statements</i>	54
3.4.3 <i>Decision Making Authority & Responsibilities</i>	54
3.4.4 <i>The Cabinet</i>	55

3.4.5	<i>Minister of Agriculture</i>	55
3.4.6	<i>General Meetings</i>	56
3.4.7	<i>The Arrowroot Industry Board</i>	56
3.4.8	<i>Chairman of the Board</i>	57
3.4.9	<i>General Manager</i>	57
3.4.10	<i>Grading and Other Committees</i>	57
3.5	THE AIA IN CONTEMPORARY TIMES (1980s-2007)	57
3.6	ST. VINCENT ARROWROOT STARCH	62
3.7	PRODUCTION TO MARKET - A SYNOPSIS	63
4	METHODOLOGY	65
4.1	INTRODUCTION	65
4.2	RESEARCH PARADIGMS AND PERSPECTIVES	65
4.3	RESEARCH METHOD	65
4.3.1	<i>Research Design</i>	66
4.3.2	<i>Validity & Reliability</i>	67
4.3.3	<i>Construct validity</i>	67
4.3.4	<i>Data Collection and Analysis</i>	70
4.4	ETHICAL CONSIDERATIONS	74
5	RESULTS	75
5.1	INTRODUCTION	75
5.2	AIA PERFORMANCE (DEPENDENT VARIABLE)	76
5.2.1	<i>Production & Supply</i>	76
5.2.2	<i>Financial Performance</i>	79
5.2.3	<i>Starch Price, Revenue</i>	84
5.3	RESOURCE BASE & RESOURCE DEPENDENCY	88
5.4	DRIVERS OF CHANGE IN THE AIA'S EXTERNAL ENVIRONMENT	89
5.4.1	<i>Starch Industry Market Characteristics</i>	90
5.4.2	<i>Government Policies and Legislation</i>	96
5.4.3	<i>Alternative Economic Enterprises</i>	97
5.5	A CAPTURED, BUREAUCRATIC STRATEGIC PROCESS	98
5.5.1	<i>AIA's Strategic Intent and Vision</i>	98
5.5.2	<i>Key Players in the Strategic Process</i>	100
5.6	CONSTANCY IN THE AIA'S STRUCTURE	110
5.7	CONSTANCY IN THE GOVERNANCE STRUCTURE	110
5.8	STRATEGIC MOVES, FUNCTIONAL STRATEGIES & MECHANISM	113
5.8.1	<i>Major Strategic Moves</i>	113
5.8.2	<i>Operational Level Strategies</i>	117
5.8.3	<i>Supply Chain Governance Mechanisms</i>	118
5.8.4	<i>Extension Service</i>	121

5.8.5	<i>Credit Administration</i>	121
5.9	SUMMARY	122
6	DISCUSSION	126
6.1	INTRODUCTION.....	126
6.2	INAPPROPRIATE STRATEGY AND STRUCTURE.....	126
6.3	MODERATORS OF THE GOVERNANCE - PERFORMANCE RELATIONSHIP	128
6.3.1	<i>Ineffective Property Rights, Social & Coordination Mechanisms</i>	128
6.3.2	<i>Inability to Control Transaction Cost</i>	131
6.3.3	<i>Inability to Control Agency Cost</i>	132
6.3.4	<i>Increasing Resource Dependency</i>	133
6.4	THE AIIP AS FAILED RATIONALISATION AND CONSTRAINT ABSORPTION.....	134
6.5	PERFORMANCE-INDUCED DECLINE	135
6.6	REVISED THEORETICAL FRAMEWORK	135
7	CONCLUSION RECOMMENDATIONS AND LIMITATIONS	138
7.1	CONCLUSION	138
7.2	LIMITATIONS	140
7.3	RECOMMENDATIONS	141
7.3.1	<i>For Research</i>	141
7.3.2	<i>For the AIA, investors and decision makers</i>	142
	REFERENCE	147
	APPENDIX	160
	APPENDIX 1: RECOMMENDATIONS FROM PREVIOUS STUDIES	160
	APPENDIX 2: PRIORITY ISSUES FOR MAKING THE AIA VIABLE	162
	APPENDIX 3: RECOMMENDATIONS FROM KAIRI SAP	163
	APPENDIX 4: ORGANIC MODEL OF STRATEGIC MANAGEMENT PROCESS	165
	APPENDIX 5: DATA MEASURES	166
	APPENDIX 6: EXPECTED PATTERNS OF FINDINGS	167
	APPENDIX 7: CASE STUDY INFORMATION SHEET	168
	APPENDIX 8: CASE STUDY PROTOCOL	170
	APPENDIX 9: SEMI-STRUCTURED QUESTIONNAIRE GUIDE	173
	APPENDIX 10: CONSENT FORM	175
	APPENDIX 11: EXAMPLE OF INTERVIEW SCRIPT – STORY BUILDING	176
	APPENDIX 12: EXAMPLE OF RAW SUMMARISED INTERVIEW DATA	178

List of Figures

<i>Figure 1: A Multi-perspective Analytical Framework</i>	12
<i>Figure 2: organisation-environment-strategy-performance (OESP) model</i>	12
<i>Figure 3: Porters Five Forces</i>	15
<i>Figure 4: Structure of Transaction Cost Theory</i>	19
<i>Figure 5: A Framework for Assessing Governance Choice</i>	23
<i>Figure 6: Model of board performance</i>	24
<i>Figure 7: A Model of Supply Chain Management</i>	29
<i>Figure 8: Supply Chain Strategy</i>	29
<i>Figure 9: Value Chain Governance Types</i>	30
<i>Figure 10: Integrated Theoretical Framework</i>	50
<i>Figure 11 : Map of the Eastern Caribbean and St Vincent</i>	51
<i>Figure 12 AIA Structure (Constructed based on Act 20 of 1976)</i>	55
<i>Figure 13: Banana production Compared with arrowroot production.</i>	58
<i>Figure 14: Arrowroot Production Activities in the early 1980s and in 2008</i>	59
<i>Figure 15: Detailed a Theoretical Framework</i>	66
<i>Figure 16: Case Study Chain of evidence</i>	68
<i>Figure 17: Arrowroot Starch Production</i>	77
<i>Figure 18: Plant Productivity (Economies of Scale)</i>	78
<i>Figure 19: Arrowroot Exports to Various destinations</i>	79
<i>Figure 20: Relationship between Rhizome Production and Cost of Production</i>	82
<i>Figure 21: Components of Factory Manufacturing Costs</i>	82
<i>Figure 22 Components of Overhead Costs</i>	83
<i>Figure 23 : A comparison Between Arrowroot and Other Starch Prices</i>	84
<i>Figure 24 : A comparison Between Arrowroot and Other Starch Prices</i>	84
<i>Figure 25 : A comparison Between Arrowroot and Other Starch Prices</i>	85
<i>Figure 26 : A comparison Between Arrowroot and Other Starch Prices</i>	85
<i>Figure 27: Starch Value Captured by the AIA 1991 and 2007</i>	86
<i>Figure 28: Redistribution of Arrowroot Value vs. Cost of Processing</i>	86
<i>Figure 29: AIA Profit Performance between 1991 and 2007</i>	87
<i>Figure 30: AIA Profits between 1991 and 2007</i>	87
<i>Figure 31: AIA's Asset and Liabilities (1991-2006)</i>	88
<i>Figure 32: Arrowroot Starch Supply Chain</i>	90
<i>Figure 33: Problems Upstream of AIA</i>	91
<i>Figure 34: Rhizome Price, Production and Harvesting</i>	92
<i>Figure 35: Acreage Produced compared with rhizome Yield</i>	93

<i>Figure 36: Problems Downstream of the AIA</i>	95
<i>Figure 37: Organisational Structure of the AIA</i>	100
<i>Figure 38: Tenure of Chairmen (1985-2008)</i>	105
<i>Figure 39: Tenure of Managers (1985-2008)</i>	109
<i>Figure 40: Major Strategy Changes by the AIA</i>	113
<i>Figure 41: Coordinating and Safeguarding Governance Mechanisms in the AIA</i>	128
<i>Figure 42: Model of Transaction Costs in the AIA</i>	131
<i>Figure 43: Relative Resource Dependency among Transacting Parties</i>	134
<i>Figure 44: Revised Theoretical Framework as Discovered by the Research Data</i>	136
<i>Figure 45: Current AIA Governance Structure</i>	144
<i>Figure 46: Proposed Changes to AIA Structure</i>	144

List of Tables

<i>Table 1: Characteristics the adaptive and interpretive perspective of strategies</i>	10
<i>Table 2: Assumptions of Rational, Learning and Cognitive Perspectives</i>	12
<i>Table 3: Sources and Types of transaction costs</i>	20
<i>Table 4: Examples of Mechanism for correcting Governance problems</i>	23
<i>Table 5: Determinants of global value chain governance</i>	30
<i>Table 6: Alternative SCM Governance mechanism</i>	31
<i>Table 7: Major Strategy/Structure responses on the Association in its early years</i>	53
<i>Table 8: 5-Year Averages of Arrowroot Contribution to GDP</i>	59
<i>Table 9: Recent initiatives of the AIA to overcome problems in the arrowroot industry</i>	60
<i>Table 10: Significant Contextual Variables over the Case Review Period</i>	62
<i>Table 11: Tactics for Improving Case Study Validity and Reliability</i>	67
<i>Table 12: Informants Interviewed and their Roles in the AIA over the Last 20 years</i>	69
<i>Table 13: Relative Advantages of Different Sources of Evidence</i>	70
<i>Table 14: Informants Interviewed and their Roles in the AIA over the Last 20 years</i>	72
<i>Table 15: Key AIA Production Data (1988 – 2008)</i>	76
<i>Table 16: Key AIA Financial Data (1988 – 2008)</i>	80
<i>Table 17: Key supply-side data</i>	90
<i>Table 18: Data indicators and Sources For Measuring Constructs</i>	166
<i>Table 19: Expected Patterns</i>	167

ACRONYMS

A.C.C.O.R.D	Australian Centre for Co-operative Research and Development
AIIP	Arrowroot Industry Improvement Project
AWB	Australian Wheat
CATM	Chinese Agricultural Technical Mission
CARICOM	Caribbean Common Market
CTF	Cassava Task Force
CWB	Canadian Wheat Board
EC\$	Eastern Caribbean Dollar (Pegged rate US\$1=EC\$2.70)
ECA	East Caribbean Agency
ECCB	Eastern Caribbean Central Bank
ECGC	East Caribbean Group of Companies
EU	European Union
FAO	Food and Agricultural Organisation (of the United Nations)
FATM	French Agricultural Technical Mission
GDP	Gross Domestic Product
GOSVG	Government of St. Vincent and the Grenadines
ICA	International Cooperative Alliance
IFAD	International Fund for Agricultural Development
KAIRI-SAP	KAIRI Strategic Action Plan
MOA	Ministry of Agriculture
NCB	National Commercial Bank
OAS	Organisation of American States
OECS	Organisation of Eastern Caribbean States
RNM	Regional Negotiating Machinery
SCM	Supply Chain management
STABEX	Stabilisation of Export Earning
STE	State Trading Enterprise
SVG	St. Vincent and the Grenadines
SVAIA	St. Vincent Arrowroot Industry Association
SVBGA	St. Vincent Banana Growers Association
SDS	Single Desk Seller
USAID	United States Agency for International Development
WIBDECO	Windward Island Development Company
WTO	World Trade Organisation

1 Introduction

Achieving desirable firm performances requires managers to match the evolving opportunities or threats in their firm's environment with the internal resource conditions and capabilities. One mechanism for achieving the optimal level of fit between these two constructs is the firm's governance structure. However, this structure must simultaneously co-evolve with the firm's competitive strategy in order to achieve efficiency and sustainable competitive advantage (Day & Wensley, 1988, pp. 109-119; Hunt, 1999; Powell, 1992).

The Single Desk Seller (SDS) governance structure is a notable option for are overcoming market failure due to small scale inefficiencies, quality deficiencies, diminished market power and undesirable prices. The strength of an SDS lies in its ability to overcome market failure by internalising and exercising control over transaction inefficiencies within a governance structure. It works by coordinating the production function of small-scale operators and then vertically integrating this collective base with the processing and marketing functions. It doing so, the SDS exploits economies of scale and scope to lower transaction costs, improve product quality, increase market-share and dictate better prices.

Despite their theoretical advantages, the viability of SDSs are being threatened by the advances in global trade de-regulation, communication and production technology, hyper-inflation associated with the cost of inputs, and changing supply-demand conditions (Boehlje, 1999; Cook, Reardon, Barrett, & Cacho, 2001).

1.1 Problem Statement

Arrowroot production in St. Vincent and the Grenadines has traditionally been an important commercial crop enterprise in the early 20th century. Arrowroot Industry Association (AIA) is a legislated, State Owned SDS, which was created in 1976, as a successor to the St. Vincent Cooperative Arrowroot Industry Association. The original cooperative was incorporated in 1930 and fashioned after the Canadian Wheat Pools Law. Its main function, then, as it is now, to collectively process members' rhizomes (harvested from the perennial plant *Maranta arundinacea*, to produce St. Vincent Arrowroot starch(Olliverre, 1984).

In its first forty-five years of existence, the cooperative successfully implemented various strategies to increase the supply of rhizome and starch to meet growing demands. These included (i) the provision of fertiliser credit, and bonus payments to members, (ii) changing the payment system for rhizome sold to the AIA from three instalments to single cash payment on delivery and (iii) leasing a 360-acre estate and subletting parcels to individual farmers to produce arrowroot rhizomes. The cooperative was able to raise production levels to 12,000,000 of starch by 1964. However, as the AIA was gaining supply-side success, the emergence of cheaper starch substitutes - driven by new processing technology - was precipitating diminished demand for this more expensive starch. From the mid 1960s till the early 1980s, the AIA was unable to withstand this competition in the United Kingdom (UK) and the United States (US) markets. Instead it sought to stockpile its starch and engage in a waiting game for better prices in the future.

During these periods of excess supply, and diminished revenues, the AIA began financing its operation through an overdraft facility, using its stockpile of starch as collateral. By 1969 the debt from this practice was \$EC3M (US\$1.12M)¹. As the AIA became more leveraged, it required the Government to guarantee future borrowings. In exchange for this, the ownership structure was changed to facilitate greater oversight and control of the operations of the AIA by Government. This was achieved by the passing of Act 20 of 1976. Contingent on this, the final decision-making rights to resource deployment and residual income were transferred from farmers to the State - effectively changing it from a cooperative to a state owned SDS.

Demand for arrowroot starch again expanded in the 1980s, spurred by an increased recognition of its value in the food industry. Since then, the AIA has attempted to stimulate increased production among producers. These 'revitalisation' efforts were mainly aimed at motivating producers to grow larger acreages of the rhizome through the provision of credit, occasional but insignificant price increases and factory refurbishments starch yield². Despite these various efforts, it could not meet the demand for starch. In the 1980s, the Ministry of Agriculture (MOA) and the AIA

¹ The East Caribbean dollar (EC\$) is fixed to the US dollar (US\$) at a rate of US\$1:EC\$ 2.67

² Starch Yield is the quantity of rhizome required to produce 1 lb of starch (approximately 1:7 of 14%)

commissioned a study into the continuing poor performance, with the aim of creating a Strategic Action Plan (SAP) for turning around the fortunes of the organisation (KAIRI, 2000). In 2001, the SAP - proposed to cost of EC\$15M (US\$5.62 M) over five (5) years was presented and adopted by the Government. In 2002, the Arrowroot Industry Improvement Project (AIIP) was implemented as phase 1 of the SAP (Alick, Patrick, & Wendell, 2001; KAIRI, 2000).

After three (3) years and approximately EC\$5 (US\$1.87 M) spent, the AIA continued to underperform; it continued to experience negative profit and could not produce the starch required to meet market demands - even when there were significant gains in the starch price. For example, in 2005, there was a contraction in starch exports by 2%, while global starch trade had expanded by 10% (GOSVG, 2006). Furthermore, the AIA was experiencing negative profits throughout the 20 years under review.

The supply problem may have been related to the inability of rhizome price to motivate production, which remained relatively flat, compared to the price for starch. While the solution seems intuitive and related to increasing the rhizome prices, the fact that this was not implemented suggests that broader issues may be at play, and need to be factored into any analysis of the AIA's long-term underperformance. What were the other factors that contributed to the supply bottleneck? Was it inappropriate strategies, structure, poor judgement and or other factors? While several consultancy studies were conducted from a practitioner stand point, the phenomenon was never formally explored from an organisational science or strategic management perspective. Hence, Carrying out such a research project, can discover rich knowledge on the intricacies of the governance structure-performance relationship in the context of a state owned single desk seller (SDS) in a developing country.

The research goal of this case study was therefore to solve the research puzzle of the failure of this single desk seller (SDS) to achieve acceptable or targeted levels of performance, despite the various strategies and investments in the last twenty (20) years.

1.2 Research objectives and questions

1. The specific objectives of this study were:
2. To analyse the environment, strategy, structure alignment of the Arrowroot Industry Association and determine its impact on the SDS's performance.
3. To examine, the effectiveness of the AIA's governance structure using different governance theory perspectives.
4. To provide valuable knowledge and insights for stakeholders of the AIA, regarding possible alternative governance mechanism for overcoming the poor performance experienced.

The research questions pursued to meet these objectives were:

1. Why has the AIA experienced decline in performance despite recent initiatives?
2. How was the AIA's structure and strategy adjusted to maintain alignment with its changing market conditions?
3. How has the governance mechanism solved or constrained the AIA's performance over the years?
4. How has the AIA's performance influenced its upstream supply base?
5. What other significant factors have contributed to the AIA's underperformance?

1.3 Purpose and Relevance and Audience

Based on the Habermasian enquiring system, this study was pursued mainly to satisfy practical interests with an orientation of knowledge normalisation (Guo & Sheffield, 2006; Stablein & Nord, 1985). This enquiry was carried out in the interpretive paradigm. From a theoretical standpoint, this study proposed to add to the knowledge of the community of strategic-management researchers regarding the specific instance of governance and strategy configuration and their antecedents on performance of a micro-sized SDS in St. Vincent and the Grenadines (a developing country). This knowledge was generated by grounding it in the discipline and theories of organisational science and strategic management.

On a practical level, this study aimed to provide the AIA's managers, policy makers and stakeholders, with recommendations for achieving environment-strategy-structure alignment which can result in optimal performance, of the AIA. It was anticipated that the knowledge gained would also highlight salient issues which the AIA may need to consider during the organisational change (M. B. Beverland & Lindgreen, 2007). Additionally, the case was expected to generate context-rich knowledge, which can be used to study specific scenarios in form governance, and would therefore be useful for educators and students in the field of strategic management.

1.4 Unit of Analysis and Boundaries

The of analysis in this study was the firm, and more specifically, the Arrowroot Industry Association (Dyer & Singh, 1998; Knoke, 1986; Nag, Hambrick, & Chen, 2007; Pettigrew, 1990). Given the role of the AIA, in coordination among farmers, and AIA (Araujo, Dubois, & Gadde, 2003) , the boundary of the study included the structures, mechanisms and operations, which were directly under the control of the AIA. This included the AIA members (rhizome producers), board, management and staff. Despite the importance of the relational view (Chen & Paulraj, 2004a), this boundary excluded non-member suppliers, labourers, buyers, the Cabinet and other key stakeholders. However, their views were considered in the context of the importance of satisfying stakeholder needs as a complementary pathway to achieving internal success.

The temporal boundary included the last twenty (20) years of the AIA's operations, as data allowed, although the context cover periods before this to allow for a rich analysis of the organisation.

The case was embedded in the agricultural sector of St. Vincent and the Grenadines, which is a Small Island Developing State in the Caribbean Community (CARICOM).

1.5 Methodology

The enquiry was conducted from a strategic management perspective, and using an integrated multi-theoretical framework based on transaction cost, principal-agency, property rights, resource-base, resource-dependency, stewardship and stakeholder

theories. The single case study methodology was used to conduct the research, using both qualitative and quantitative data.

A case study protocol was developed to guide the field work and analysis phases of the study. The in-depth interview method was used to collect qualitative data from key decision maker's and industry players, while secondary data (qualitative and quantitative) were collected from the AIA's records (Minutes of Board meetings, correspondence and financial statements etc), relevant reports and Budget addresses. Interview analysis was guided by methods prescribed by Miles and Huberman (1994) and R. K. Yin (2003). Both data collection and analysis phases were conducted using a reflexive approach (Alvesson, 2003; Mauthner & Doucet, 2003).

1.6 Limitations

The major limitations of this study were: (i) the time span of the study, and in particular, the timeframe for data collection did not facilitate returning to the field for further data searches. This was critical given that there were instances of missing data, (ii); potentially valuable informants were unavailable for interviews, thereby limiting greater level of variance in the data; and (iii) there were significant levels of missing data in the AIA's records.

1.7 Thesis outline

This report is divided into seven (7) chapters along with the references and appendices.

Chapter Two consists of a review of the theoretical and empirical literature, which are central to the analysis of this case. This includes a review of the perspectives, analytical framework and relationship between competitive and manufacturing strategies and their relationship to firm performance. A similar review of governance theories and structures is also presented. A brief overview is then provided of some empirical findings relating to strategic management in developing countries and privatisation as an option for restructuring state owned enterprises. Finally, based on the review conducted a theoretical framework was designed and presented to guide the analysis of this case study.

Chapter Three outlines the research context within which the case is embedded and will be analysed. It provides a synopsis of the key Country and sector conditions within which the AIA operated. This included a synopsis of AIA Act - which is an exogenous variable in the theoretical framework – focussing on the main elements relating to governance and the strategic process.

Chapter Four outlines the research methodology which was developed in line with the literature review, research questions and case context. This includes sections on the research design (research paradigm, data collection and analysis, strategies for achieving reliability and validity) and ethical considerations.

Chapter Five provides the results of the data collection phase. It starts out with a presentation of the data relating to measures of the dependent variable (firm performance). This is mostly comprised of objective data gleaned from secondary, but also includes some qualitative data relating to agency and transaction costs. The subsequent sections then provide the results relating to the measures of governance structure (independent variable) and other mediating variables which interacted to influence the AIA's performance.

Chapter Six discusses the results in the context of the research questions in Chapter 1, the main theories and the theoretical framework in Chapter 2, and the case context in Chapter 3. It ends with a revision of the *a priori* theoretical framework to include additional prominent variables of interest.

Chapter Seven presents the conclusions of the research, by providing summarised and definitive answers to the research questions. It also outlines the limitations encountered in carrying out the study, and to applying the findings of the research. The final section of this chapter provides recommendations for further research as well as for overcoming the governance-related problems of the AIA.

2 Literature Review

We don't receive wisdom; we must discover it for ourselves after a journey that no one can take for us or spare us. Marcel Proust (1871 - 1922)

2.1 Theoretical Literature

2.1.1 Introduction

This chapter provides a review of the theories (normative and descriptive) and empirical findings relating to the complex and dynamic governance-performance relationship which was at the heart of this study. The first section broadly explores various concepts, perspectives, and analytical models of strategic management which are currently used to analyse firm performance. This is followed by a review on governance theories which are central to understanding how various configurations of structures, and mechanisms are shaped by the environment and firm strategy, and how this in turn impacts on firm performance.

The second section presents a review of some empirical findings which either supported the normative or descriptive theories, or were found to be at variance with the theoretical literature. These are followed by two small sections on strategic management in developing economies and on privatisation as an option for structural change. These empirical findings facilitated an understanding of how performance outcomes can vary according to context-based contingencies.

The chapter closes with a summary of the findings and the development of a literature based theoretical model to be used to evaluate the relationship between governance structure and performance in the AIA.

2.1.2 Strategy

Structure of is a multi-dimensional, multi-paradigmatic construct, which is variably conceptualised and defined depending on the domain of focus, research perspectives and strategy-types (Galbraith & Schendel, 1983; M. E. Porter, 1991; van de Ven, 1992).

Domain-based definitions of strategy have followed the ‘swings of the pendulum’ as new frontiers for success emerged (Herrmann, 2005; Hoskisson, Hitt, Wan, & Yiu, 1999). Early definitions focussed on the on exogenous industry variables, while later developments subsequently shifted to the internal ‘resource-based-view’ domain. This latter shift accounted for the significant contribution of managerial actions and learning on organisational outcomes (Herrmann, 2005; Hoskisson et al., 1999). However, as Herrmann (2005) noted, contemporary frameworks are increasingly integrating both internal and external domains to accommodate the shifts brought about by the effects of globalisation. Specifically, the firm-boundary is increasingly being blurred as firms seek new ways to remain profitable, such as through the adoption of vertical forms of organisation, technologically-driven transactions (Herrmann, 2005), and inter-chain competition (Boehlje, 1999; Chen & Paulraj, 2004a; K. C. Tan, 2001).

Apart from domain, strategies can be delineated according to the particular research lens. Four of these are the linear, adaptive, interpretative and ecological perspectives (Hannan & Freeman, 1984; Singh, House, & Tucker, 1986).

Strategies which conform to the linear perspective are deterministic and concerned with the various means (decisions and actions) by which managers may attempt to achieve an end (organisational goals).

The adaptive view of strategy assumes that the organisation cannot change its environment and therefore must co-evolve with it in order to remain successful. In this context, strategy is defined as, “concerned with the development of a viable match between the opportunities and risks present in the external environment and the organization's capabilities and resources for exploiting those opportunities” (Hoffer, 1973, as cited by Chafee 1985 p.91).

The interpretative perspective is based on the assumption that an organisation’s reality is socially constructed by its managers. Hence, achieving business success will require the manager to influence the attitudinal and cognitive dynamics of legitimate stakeholders to support the firm’s objective. Table 1 below summarised the main characteristics of the adaptive and interpretive perspectives.

The ecology perspective proposes that, over time, stable organisational structures will be ‘naturally selected’ from among a population of organisations, since they are more predictable, accountable and successful. Accordingly, successful firms are more likely to be mature firms which are experiencing structural inertia. Conversely, structural change is likely to be disruptive, and precipitate poor performance and organisational decline (Hannan & Freeman, 1984; Singh et al., 1986).

Table 1: Characteristics the adaptive and interpretive perspective of strategies

	Adaptive Perspective	Interpretive Perspective
Sample definition	– Concerned with the development of a viable match between the opportunities and risks present in the external environment and the organization's capabilities and resources for exploiting those opportunities.	– Orienting metaphors constructed for the purpose of conceptualizing and guiding individual attitudes of organizational participants
Nature of strategy	– Achieving a "match" – Multifaceted	– Metaphor – Interpretive
Focus of strategy	– Means	– Participants and potential participants in the organization
Aim of strategy	– Co alignment with the environment	– Legitimacy
Strategic behaviours	– Change style, marketing, quality	– Develop symbols, improve interactions and relationships
Associated terms	– Strategic management, strategic choice, strategic predisposition, strategic design, strategic fit, strategic thrust, niche	– Strategic norms
Associated measures	– Price, distribution policy, marketing expenditure and intensity, product differentiation, authority changes, proactiveness, risk taking, multiplexity, integration, futurity, adaptiveness, uniqueness	– Measures must be derived from context, may require qualitative assessment

Source: Extracted from (Chaffee, 1985, pp. 91-94)

While these perspectives may be applied separately, multi-perspectives frameworks have proven to provide richer and more realistic analysis (Chaffee, 1985; Frishammar, 2006; Hannan & Freeman, 1984; Singh et al., 1986).

2.1.2.1 Strategic Fit and Management

The extent to which a firm maintains strategic fit on a continual basis significantly influences its performance. Xu, Cavusgil and White defined strategic fit as, “the efficiency with which the organization's resources and capabilities are aligned with the opportunities and threats the environment presents... and the effectiveness with which the organization implements a chosen strategy in certain environments” (p. 3).

This definition covers the ‘implementation-formulation’ and gestalt schools of fit – both of which focuses on the integrated domain, but also accounts for the content and process conceptualisations of fit respectively. Including these two schools of fit in an integrated framework facilitates comprehensive analysis and conclusions (Armenakis & Bedeian, 1999).

When examined longitudinally the concept of strategic fit takes on a dynamic characteristic and requires continual adjustment as the firm’s environment evolves. This process of strategic management is described as, the super ordinate and continuous organisational process for maintaining and improving the firm’s performance by managing, that is, enabling, formulating, and realising its strategies” (Farjoun, 2002, p. 578). It can be studied using various analytical lenses, ranging from the deterministic frameworks such as the structure-conduct-performance to the organic models.

The structure-conduct-performance (SCP) and resource-based-view (RBV) research frameworks were the most dominant paradigms by which empirical studies of strategic management were conducted. These frameworks provided for rich analysis of research problem based on the popular perspectives (Coles, McWilliams, & Sen, 2001; Dalton, Daily, Ellstrand, & Johnson, 1998; Dharwadkar, George, & Brandes, 2000; Farjoun, 2002; Furrer, Thomas, & Goussevskaia, 2008; Udayasankar & Das, 2007). However, these ‘content of strategy’ frameworks were criticised for being linear, deterministic and focussed on the influence of either the exogenous or endogenous firm variables on firm performance, at the expense of the other (Farjoun, 2002; Hambrick, Werder, & Zajac, 2008; Hoskisson, Eden, Lau, & Wright, 2000).

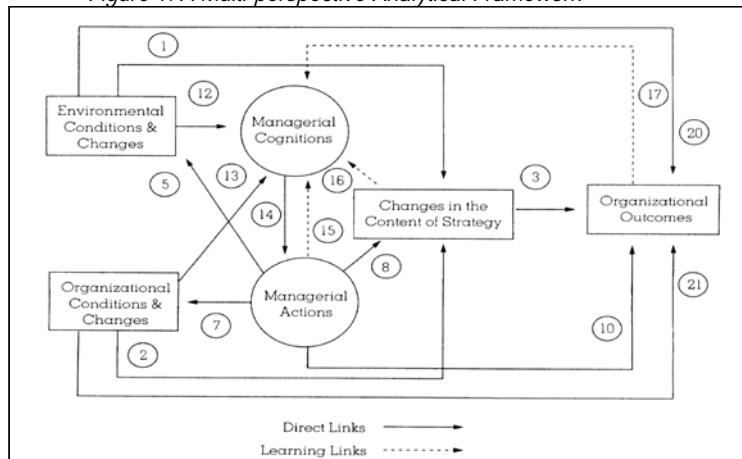
To accommodate more comprehensive empirical testing of theories in strategic management, many integrated frameworks have been developed. These include the rational, learning and cognition perspectives. Rajagopalan and Speitzer (1997) reviewed these perspectives and identified their strengths and weaknesses of each (see Table below). To overcome these, Rajagopalan and Speitzer (1997) developed a multi-perspective framework (see Figure 1), which attempted to capture the relative strengths of the individual perspective.

Table 2: Assumptions of Rational, Learning and Cognitive Perspectives

	Rational perspective	Learning perspective	Cognition Perspective
Assumptions	successful firm performance result from a match between a firm's strategy and its internal and external environment	The opens up managerial 'black box' to account for the performance resulting from the gap between a firm's reality and managerial cognition.	The assumes that managers define the firm's environment, according to their cognitive ability and accounts for the non-economic outcomes of learning on the strategic change process.
Weaknesses	it does not predict misalignment, it does not account for the influence of context variables on performance, it is normatively and conceptually weak (there is little correspondence between constructs and their measures), managerial cognition was treated as a black box, aggregation problems and confounds result from the practice of measuring of environmental change at the industry level and strategy change at the firm level.	the constructs were poorly defined, the causal relationship between managerial actions and change were not clearly defined that the prevalence of descriptive studies in this sub-field limits knowledge accumulation across studies	The constructs were not well defined and failed to empirically or conceptually distinguish between the cognitions and actions, retrospective sense making are constrained by attribution biases and memory losses, studies often did not address economic outcomes

Source:(Rajagopalan & Spreitzer, 1997)

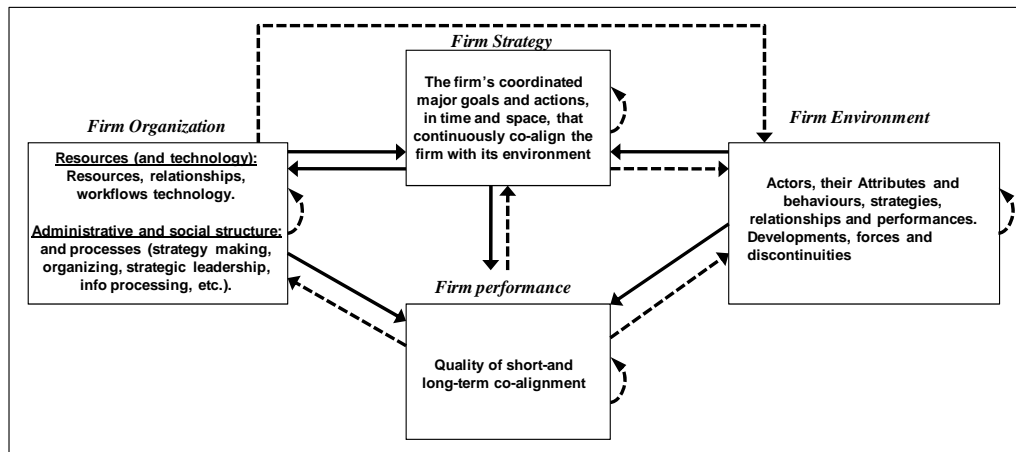
Figure 1: A Multi-perspective Analytical Framework



Source: (Rajagopalan & Spreitzer, 1997, p. 70)

Recently, the ‘organic’ perspective of strategic has been gaining popularity, as it seeks to overcome the weaknesses of the aforementioned models. This perspective seeks to capture the complex and dynamic nature of strategy by mapping relationship to demonstrate the main effects as well as secondary relationships include feedback-loops. One example of this is the organisation-environment-strategy-performance (OESP) model developed by Farjoun (2002). The OESP facilitates analysis of strategic change by measuring the main, indirect and feed-back relationships between contingency variables such as firm’s strategy, resources, structure and environment and performance as the independent variable. A ‘one-off’ strategic process model was also developed to illustrate the process whereby strategic decisions are made (see Appendix 4).

Figure 2: organisation-environment-strategy-performance (OESP) model



Source: Illustrated from (Farjoun, 2002, p. 573)

2.1.2.2 Competitive Strategy and Firm Performance

While strategy is viewed as a unitary concept, it is conceptualised as an integrated hierarchical set of strategies, where the selection of broader higher-order strategies such as competitive and corporate strategy directly influences the choice of business and then functional level strategies (Kathuria, Joshi, & Porth, 2007).

Competitive strategy, is defined as, “patterns of managerial actions that explains how the firm achieves and maintains competitive advantage through positioning in product markets” (Zott & Amit, 2008, p. 5). According to Porter,(1980) the choice of cost leadership, differentiation or focussed competitive strategy is contingent on a firm’s competitive position relative to those of its rivals (M. E. Porter, 1991). This in turn has implications for the choice of operational strategy and performance. A brief overview of each is provided below.

Cost-leadership strategy is pursued when a firm can capture greater market share by creating and delivering a product to the market at a cost lower than its competitors. This strategy is preferable where the costs of production and exchange are high, but where the upstream and downstream market conditions are stable (Ward, Bickford, & Leong, 1996). Pursuing this strategy requires either (i) significant investments in fixed assets (manufacturing technology) (ii) pursuing vertical integration and or (iii) gaining preferential access to key resources, in order to benefit from low variable cost, and economies of scale and learning (M.E. Porter, 1980). The organisational structure associated with firms pursuing a cost-leaders strategy is assumed to be organic and

highly bureaucratic, with centralised decision-making by top level managers and technical specialists (Ward et al., 1996).

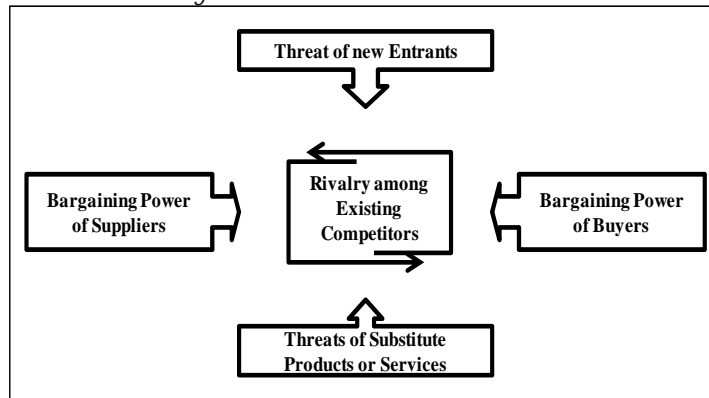
A successful product-differentiation strategy increases a firm's market share by better satisfying those consumers who are less price-sensitive and therefore willing to pay a premium price for unique product-attributes (M.E. Porter, 1980). Firms pursuing this strategy invest relatively little in plant and equipment, but significantly in product innovation and in marketing. These firms therefore incur higher variable unit cost of production. They are associated with organic structures, specialised skills and manufacturing strategies such as quality, flexibility, delivery and cost. A differentiation strategy is preferable when the product-environment is dynamic and comprises a differentiable, heterogeneous consumer base. Conversely, it is not recommended for mature markets where cost-leaders can supply a comparable product at a lower price, or where the firm incurs high fixed costs associated with expanding its facilities to pursue this strategy (Ward et al., 1996).

Focussed-cost and focussed-differentiation strategies are adopted by small firms with small resource bases, or by those which cannot successfully compete against the capabilities of those pursuing pure cost-leadership or differentiation strategies (M.E. Porter, 1980). Successful implementation of this strategy requires the firm to effectively segment a sufficiently heterogeneous market and then target these segments with specific product-offerings.

Porter (1980) argues against the simultaneously against pursuit of both pure forms of competitive strategy, except in cases where other competitors are unsuccessfully pursuing it ('stuck in the middle'), or, if the firm enjoys significant economies of scale, or monopoly over major technological innovation. However empirical data has demonstrated that firms have pursued this strategy successfully (Campbell-Hunt, 2000; Murray, 1988).

Porter (1991) asserted that firm-success is partially dependent on its industry characteristics. Given this assumption, a firm must be able to assess its competitive position - using the model in Figure 3 below - and match it with the appropriate choice of competitive strategy.

Figure 3: Porters Five Forces



Source:(M. E. Porter, 1991, p. 101)

Firms will be in a weak bargaining position when buyer and suppliers power is high, or where the entry barriers are low. In this scenario, the firm cannot dictate prices and so must pursue a cost-leadership strategy in order to reduce costs and earn satisfactory long-term profits. This strategy is also prescribed to overcome the threat posed better performing substitutes - especially where intense price-based competitions prevail. Product-differentiation will be the preferred strategy in cases where the threat of entry by new firms is eminent. In industries with an intense level a firm can grow selective demand by pursuing a focussed-strategy which emphasises product-innovations and communication.

Apart from influencing the choice of business, functional and manufacturing strategies, competitive strategy may influence the choice of governance structure (D. Miller, 1988; Zott & Amit, 2008), and manufacturing strategies. (Amoako-Gyampah & Acquah, 2008; Ward et al., 1996; Ward & Duray, 2000).

2.1.3 Governance Structure – Definition

The governance-structure construct has been noted to significantly influence firm-performance (Ketchen et al., 1997; Sanchez-Ballesta & Garcia-Meca, 2007; X. Yin & Zajac, 2004), although poor choice or implementation can also erode firm value (Becht, Bolton, & Roell, 2005).

Like strategy, this construct has multiple definitions interpretations based on the particular theories and goals that they were designed to achieve. For example, Denis and McConnell (2003), defined it as, “*the set of mechanisms –both internal institutional and*

market based - that induce the self-interested controllers of a company...to make decisions that maximise the value of the company to its owners" (p. 2). This definition facilitates the exploration firm governance in the context of both an external and as well as the internal transactions. However, it provides a less than ideal definition, since it excludes potential transacting parties – for example those identified by agency and stakeholder theories - which are not shareholders, but who may stake in the firm and can influence its performance. A broader definition used by Yin and Zajac (2004) describes governance structure as *"an organization design that incorporates systems of decision making, operational control, and incentives"* (p. 367). This deliberately broad definition facilitates the use of a multi-perspective analytical framework in governance research.

2.1.4 Governance Theories

The most prevalent of these theories of governance are property rights, agency, transaction cost, resource base, resource dependency, stewardship, and stakeholder theories. The following sections present brief overviews of these theories.

2.1.4.1 Property Rights Theory

Property rights theory (PRT) posits that managers are constrained by bounded rationality and or information asymmetry, resulting in the creation of incomplete contracts and transaction inefficiencies (Hart & Moore, 1990). PRT seeks to overcome these problems and achieve costless transactions by conferring ownership rights of the firm's assets to appropriate transacting parties. Internally, this mechanism will reduce opportunism and increase the monitoring activity of owners (Ortamann & King, 2007). When transaction inefficiencies occur outside of transacting parties, PRT proposes to internalise them, as long as the benefits exceeds the costs (Demsetz, 1988). For example, Hart, and Moore (1990), as cited by Boehlje (1999), indicates that, "...unless secured by endogenous learning or other mechanism, value is better protected with a hierarchical governance structure" (p. 1035).

Nilsson (2001) noted that organisations like cooperatives may face special problems in implementing this mechanism, since the allocation of common property may make it difficult to efficiently allocate residual income. Three categories of

inefficiencies noted by Nilsson (2001) were technical, allocative and scale inefficiencies. Technical inefficiency results from the introduction of additional controls or from the reduced incentive for owners to monitor management or to innovate. Allocative inefficiencies occur when property rights are underutilised and contestable. Scale inefficiency results from increased cost of production, such as when there are a small number of patrons, or where there are legal constraints on the business portfolio. Ortamann and King (2007), noted influence-cost problem as another source of inefficiency. This relates to the cost of shareholders lobbying to influence how costs and benefits are allocated within the organisation.

A critique of PRT is that it fails to account for the ex-post opportunism that occurs when owners of residual rights maximise income at the expense of others, especially when it is difficult to predict and measure income streams.

2.1.4.2 Agency Theory

Jensen and Meckling (1976), defines an agency relationship as one where “...the principal(s) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority” (p. 308). This theory assumes that both agents and principals are motivated to maximise their individual profits, and so are inherently predisposed to pursuing diverging goals and interests. In such case, the agent may act opportunistically to gain at the principal’s expense. Agency problems may also occur when a firm’s owner(s) seek to maximise profit, even at the expense of creditors or employees.

John and Senbet (1998) categorised agency problems as, (1) private agency, including excessive perquisites due to managerial agency, and under investment by debt holders and stakeholders, and (2) public agency, including (i) overinvestment by government (ii), risk-shifting by government and debtors (iii) asymmetric information of new equity holders and financial failures due the actions of debt holders and other stakeholders. These problems are more prevalent when it is difficult or expensive to monitor agents, when there is information asymmetry, when the agent possesses superior inside knowledge, when there is a divergence in the risk taking attitude of

principals and agents, and when agents shirk in carrying out their duties due to moral hazards (Eisenhardt, 1989a).

The costs associated with agency problems are the ex-ante costs of establishing and monitoring contracts by principals, the costs of contracting agents, as well as the ex-post residual costs of incomplete contract (Jensen & Meckling, 1976; Nicholson & Kiel, 2007; Nilsson, 2001).

Agency theory proposes the firm - as a nexus of contracts – is the most efficient means by which firms can minimise managerial discretion, decision-making costs, and providing clearly defined fiduciary duties for key functionaries (Becht et al., 2005; Trienekens & Beulens, 2001). In firms with owner-control separation, the key mechanisms prescribed for overcoming agency problems include CEO incentive alignment, an optimally configured and independent board of directors, the firm's debt policy, the level of ownership, and markets for both managerial talents and corporate control (Agrawal & Knoeber, 1996; Becht et al., 2005; Coles et al., 2001; Godfrey & Hill, 1995; Klein, 1998; Ortamann & King, 2007).

The implementation of these mechanism in traditional cooperatives are perceived to be problematic since equity cannot be transferred in a share market (Ortamann & King, 2007) and the difficulty in achieving CEO incentive alignment in the absence of ownership options as outlined by Jensen and Meckling (1976).

2.1.4.3 Transaction Cost Theory (TCT)

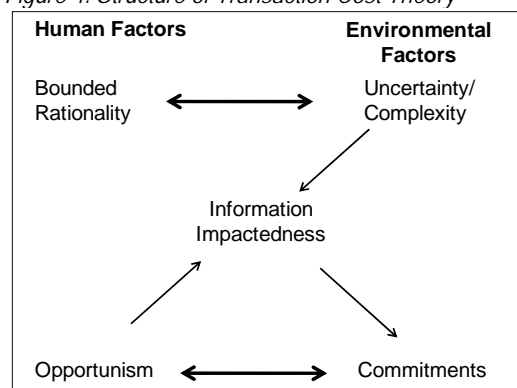
TCT conceptualises the 'firm as a contract' (Williamson, 1991), with some governance configurations being inherently more efficient than others in achieving low transaction costs. To achieve costless transactions or at least to minimise it, the firm must match its choice of transaction governance - market, hybrid or hierarchy – with the level of asset specificity present in those transactions (the ability to find alternative use for specialised skills or assets) (G. F. Davis, 2005; Williamson, 2002).

TCT predicts that higher levels of asset specificity require progressively greater levels of integration (hybrids and hierarchies) to minimising decision-making and

transaction costs. Rindfleisch and Heide (1997) argues that firms with low asset specificity, which experience low transaction costs may chose a market structure, while hierarchies may best suited to those where transaction costs exceeded production costs advantages. However where the level of asset specificity is low, higher levels of behavioural and environmental uncertainty (bounded rationality and opportunism technology, demand and price volatility) will also leads to these choices of structure.

Like PRT and agency theories, TCT assumes that firms are constrained in designing complete contract due to the bounded rationality of decision makers. Because of this, firm incur ex-post costs related to the opportunistic behaviour of partners to capture rents in cases where contracts may be silent. Davis and Devinney (1997) presented a model (see Figure 4 below) showing how the various contingencies interacts create transaction costs.

Figure 4: Structure of Transaction Cost Theory



Source: (Davis & Devinney, 1997, p. 16)

The major transaction costs are associated with safeguarding asset specificity, adapting to uncertainty and measuring performance. These are categorised in

Table 3 below. Criticisms of TCT include (i) the association of hierarchies with firm performance is was not an indication of direct causation, since other unobservable variables may have also contributed, (ii) hierarchies do not necessarily control opportunism, and (iii) TCT does not account for the ability of social control mechanism to increase firm efficiency (Ghoshal & Moran, 1996; Grover & Malhotra, 2003). These criticisms demonstrate the weakness of TCT as a singular predictor of governance structure.

Table 3: Sources and Types of transaction costs

	Asset Specificity	Environmental Uncertainty	Behavioural Uncertainty
A. Source of Transaction Costs Nature of Governance Problem	Safeguarding	Adaptation	Performance Evaluation
B. Type of Transaction Costs			
• Direct Costs	Costs of crafting safeguards	Communication, negotiation and coordination costs	Screening and selection costs (ex ante) Measurement costs ex post)
• Opportunity Costs	Failure to invest in productive assets	Maladaptation: Failure to adapt	Failure to identify appropriate partners (ex ante) Productivity losses through effort adjustments (ex post)

Source (G. J. Davis & Devinney, 1997, p. 16)

2.1.4.4 Stakeholder Theory

Stakeholder theory predicts a direct or moderated relationship between stakeholders-management and firm-performance (Berman, Wicks, Kotha, & Jones, 1999). It assumes that firm-success will be achieved when a firm balances its profit-maximising objective with that of satisfying the interests of its key stakeholders (Donaldson & Preston, 1995; Freeman & Cavinato, 1990; Jones & Wicks, 1999; Phillips, Freeman, & Wicks, 2003).

Stakeholders in the context of this theory are "...individuals and constituencies that contribute, either voluntarily or involuntarily, to its wealth-creating capacity and activities, and who are therefore its potential beneficiaries and/or risk bearers" (Post, Preston, & Sachs, 2002, p. 8). However, stakeholders can also be categorised according to their ability to wield power and influence and therefore firm performance (R. K. Mitchell, Agle, & Wood, 1997). As such, mechanisms such as a multi-constituency board can facilitate the direct or indirect performance. Conversely, a failure to actively manage stakeholder relationship may erode firm value.

2.1.4.5 Stewardship Theory

Stewardship theory can be considered the antithesis of agency theory, in that it assumes that managers are not prone to opportunism, but rather, derive satisfaction from maximising shareholder and firm value. Therefore, they are inherently good stewards whose motives are aligned with that of their principals (Coles et al., 2001; Dalton et al., 1998; Nicholson & Kiel, 2007; Nilsson, 2001). It proposes that structures be adjusted to

facilitate the benefits that managers can bring. For example, by adoption a dual leadership structure (J. H. Davis, Schoorman, & Donaldson, 1997). Such structures facilitate a change in orientation from a controlling to a strategic partnership function (Cornforth, 2004).

The critiques of stewardship theory includes (i) it is potentially problematic for co-operatives where directors lack capacity to engage in a valuable partnership with management, (ii) it assumes that individuals are always making perfectly rational decisions, and (iii) it also ignores the influences of power and of the individual's value systems and idiosyncrasies.

2.1.4.6 Resource Based Theory

Resource based theory, and in particular, the resource based view (RBV) of the firm is inward focussed and seeks to predict and prescribe the relationship between the firm's physical and intangible resources characteristics (superiority, rarity, durability, imitability, substitutability and or appropriability) and performance (Armstrong & Shimizu, 2007; Barney, 1991; Day & Wensley, 1988). However, Gordon (1988), noted that firms may experience sustainable disadvantage when it fails to innovate because it cannot identify the cause(s) of its resource inimitability and rareness.

Eisenhardt and Martin (1999) also theorised that a firm's ability to competitive advantage depends on its dynamic capabilities to match its resource configuration with the evolving market condition. They noted that in moderately dynamic market conditions, a firm's performance depends on its ability to follow rules of thumb for routinised activities. However, success in very dynamic environment requires gaining new knowledge in order to adapt to new environments. Where these strategically important and inimitable resources exist outside the firm, it may seek to internalise them. Alternatively, it may develop alternative resources or create barriers to their use (Wernerfelt, 1984).

The RBV has been criticised for its theoretical and methodological weaknesses stemming from its inability to make generalisations (Aguilera, Filatotchev, Gospel, & Jackson, 2008; Armstrong & Shimizu, 2007; Hoskisson et al., 2000). Armstrong and Shimizu (2007), proposed several ways to overcome these shortcomings, including

clarifying the theoretical boundary conditions, incorporating moderator variables, and the use of non significant findings to clarify spurious conclusions.

2.1.4.7 Resource Dependency theory

While RBV is inward facing, resource dependency theory is outward facing and proposes that an organisation's performance is dependent on its ability to access needed resources external to it (Casciaro & Piskorski, 2005; Toms & Filatotchev, 2004b). The governance structure may therefore be modified to allow the firm to pursue investment strategies with external partners in order to secure needed resources. Alternatively, the organisation may choose to reduce dependence on the resource, create alternative resources, or forming coalitions to achieve this.

2.1.5 Governance Mechanisms

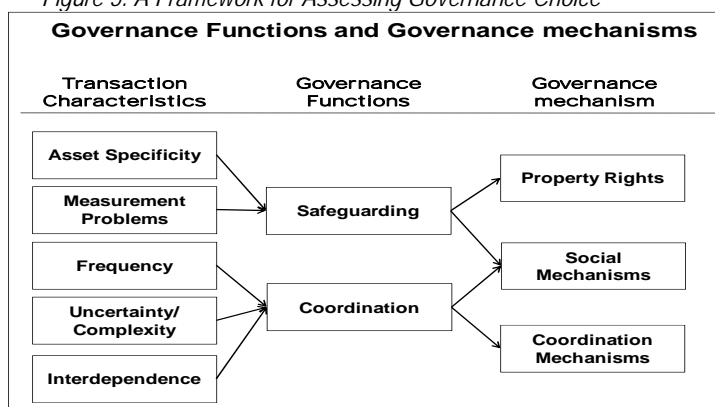
The choice of governance mechanism depends on the nature of the governance problem and the selection of the most appropriate governance theories to revolve these. Furthermore, it is envisaged that these mechanism would be multifunctional, solving multiple problems both internally and external to the firm (Coles et al., 2001). These choices are neither straightforward, nor result in a permanent solution, as even optimal mechanism may become inefficient over time.

The study of governance structure must therefore be multi-theoretical (Brunninge, Nordqvist, & Wiklund, 2007; Nicholson & Kiel, 2007) since individual theories cannot show the whole picture firm governance. Similarly positions were by (Cornforth, 2004). However, for the purpose of this study, these governance mechanisms are discussed separately to study their specific functions.

An example of the multiple choices of governance functions and mechanisms is presented in seen in Figure 5 below. This analytical framework by Bijman (2006) predicts the choice of either the safeguarding and or coordination governance functions to overcome the governance problems by some Dutch flower producers. It further illustrates the choice of mechanisms from which the firms can choose to carry out these functions. Specific examples are presented in

Table 4 below.

Figure 5: A Framework for Assessing Governance Choice



Source: (Bijman, 2006, p. 212)

Table 4: Examples of Mechanism for correcting Governance problems

Transaction Characteristics	Governance Function	Governance Mechanism
Safeguarding mechanism (administrative controls based on property rights)		
Increased asset specificity Increased difficulty in transaction measurement	Safeguarding	Different distribution of property rights
Opportunistic behaviour		Reputation and social control
Coordination mechanisms		
Frequent transactions	Coordination	Standardisation
High level of uncertainty or complexity		Direct supervision & Mutual adjustment (depending on the distribution of property)
Pooled Interdependent transactions		Standardisation
Sequential Interdependent transactions		Direct supervision
Reciprocal Interdependent transactions		Mutual adjustment Restricted access & Cultural homogeneity (Social Mechanisms)

Source: Summarised from (Bijman, 2006, p. 213)

External governance mechanisms range from open market mechanisms to strict hierarchies. Market mechanisms, are based on exchange between anonymous buyers and suppliers. In this setting is assumed that the price is the product of the interaction between demand and supply. Specific mechanisms in this category include delegated monitoring and take-overs. Hierarchies relate to the strict vertical integration of firms to reduce competition among members and to create power asymmetry thereby allowing for the manipulation of price and other transactional factors in the firm’s favour. Hybrids mechanisms are the various configurations between markets and hierarchies.

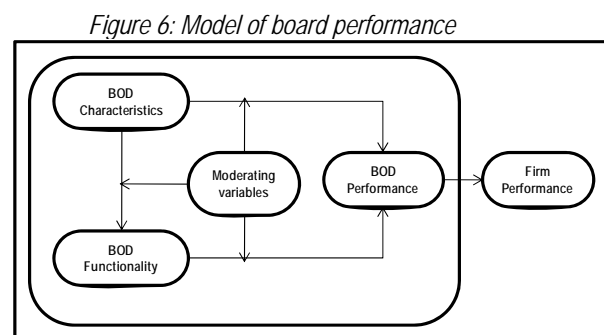
Internal governance mechanisms may include boards of directors, executive compensation alignment and the ownership structure of the firm (Coles et al., 2001; D. K. Denis & McConnell, 2003).

2.1.5.1 Executive compensation

Executive compensation seek to solve agency problems by offering various combinations of basic and bonus salaries, stock options, pension rights and severance pay to management (Becht et al., 2005). It assumes that this mechanism will motivate the agent to pursue the goal of principals. However, this model may not guarantee financial propriety.

2.1.5.2 Boards

The Board of directors is another governance mechanism that seeks to ensure principals-agents goal alignment, and serves the function of efficiently representing these principals, while separating ownership and control (Agency theory). Murphy and McIntyre (2007), developed a conceptual model to illustrate how a board can influence firm success (see Figure 6 below). They noted that the configuration, membership demographics and roles of the Board may influence its performance and therefore the performance of the firm. The moderating variables of this model are however silent on key determinants of firm and board performance such as strategic process and behavioural variable (Hendry & Kiel, 2003; Petrovic, 2008).



Source: (Murphy & McIntyre, 2007, p. 210)

Board configuration vary significantly, based on the efficiency objectives of the firm (Miwa & Ramseyer, 2005). For example the board size (number of members), the frequency of meetings, the level of independence (number of outsiders), leadership structure, board experience, skills, and demographic characteristics of the individual members all influence performance (Murphy & McIntyre, 2007).

Agency, stakeholder and transaction cost theory argues in favour of outside (independent) members on board. The way that boards are configured (leadership structure, proportion of outside/independent members and separation of policy and operations decision-making) are also used to improve objectivity and independence in decision-making, hence minimising agency cost.

Nicholson & Kiel (2007) found that board composition and leadership had virtually no effect on firm performance regardless of firm size. Firms even experience high agency costs and low monitoring despite the significant presence of outside directors. However, the absence of outside directorship may reduce accountability and transparency in decision making, thus leading to potentially high opportunistic behaviour, as well as the reduce the potential for building linkages with important contacts in a firm's network (Toms & Filatotchev, 2004b).

Dual leadership is an indication that the firm values the stewardship perspective. Kang and Zardkoohi (2005), noted that dual leadership may lead to improved performance when it solves external failure and when it is implemented as a reward for CEO performance. However, these may be dependent on the industry characteristics, principal-agent incentive alignment mechanisms and the nature of the information technology.

The extent of board independence (proportion of directorships external to the firm) is another dimension that may impact on performance, though the empirical findings did not always support this assumption (de Andres, Azofra, & Lopez, 2005).

Members of cooperatives (principals) may have weak or no influence on board representatives' decision making, thereby limiting their influence and control of management (Spear, 2004). This is more acute when the membership is diverse (heterogeneous) and or dispersed. The restricted ability to influence decision making may be a consequence of (a) information asymmetry, and the cost or difficulty associated with accessing this information, (b) the paradox of voting, and or (c) restricted ability to pursuing collective actions (J. Mitchell, 1997). A passive role, by itself, may not negatively result in negative firm performance. This is because

competent management may negate such inefficiencies. Conversely, an incompetent management would result in increased agency costs in such cases (Nilsson, 2001).

Some key functions which a Board typically perform may include CEO recruitment, monitoring of management, and making policy and or resource decisions (Becht et al., 2005). Board functionality is moderated by factors such as the level of decision-making authority delegated to it, adaptability to dynamic conditions; members' commitment; agenda setting and implementation capability, goal setting and communications ability, and incentive alignment (Caves, 1980; J. H. Davis et al., 1997; Hendriske, 2005; Murphy & McIntyre, 2007; van de Ven, 1992).

Boards can be captured by a powerful CEO. In such cases, they function only as a rubberstamp. This is more likely when there is significant information asymmetry, due to the superior knowledge of the CEO and or the limited cognitive ability of board members. This behaviour is more likely with a dual leadership structure (Dalton et al., 1998) and when directors seek the CEO's support in getting re-elected (Becht et al., 2005).

Board performance may be evaluated based on their various roles in monitoring of management and policy, environmental scanning and planning and acquiring of financial and other intangible resources such as knowledge through the firm's network (Murphy & McIntyre, 2007). This may however not be straightforward, given its complexity and unobservable constructs (Cornforth, 2004). For example, agency theory focuses on the monitoring function of the board, and fails to account for the other functions, which the board carries out. Alternatively, it is suggested that integrative process models should be developed (Nicholson & Kiel, 2007).

2.1.5.2.1 Board models

There are different configurations of boards, including block holder, multi constituency and delegated monitoring models.

Blockholder models are designed to provide at least one principal with sufficient ownership rights to motivate them to engage in the monitoring function (PRT).

However, this may not guarantee execution of this function, since large blockholders may forego it in preference to engaging in ‘hold ups’ and risk-shifting behaviour in order to secure greater revenues (Becht et al., 2005). An associated problem with this model is the excess monitoring by block-holders to avoid certain investments, Also, expropriation and collusion may result in increased costs, which in turn erode shareholder value and firm efficiency.

Multi-Constituency board models are the various configurations that are designed to share control with various stakeholders, including employees. This is based on the desire to protect stakeholder’s firm specific investments from management hold-ups and to avoid hold up actions such as union strikes. This is common in organisations such as universities, law firms and consultancy firms, where employees may dominate boards. Inclusion of employees in corporate governance can facilitate greater efficiency (Becht et al., 2005). Some employers may be uncomfortable with this arrangement and may even exclude these constituents from key decision making in order to protect sensitive information from being disclosed (Becht et al., 2005).

Delegated monitoring and large creditors models aim are designed to provide objective monitoring for the firm. However, these monitors may have little incentive to engage in active monitoring (Becht et al., 2005; Cornforth, 2004)

2.1.5.3 Relational Governance Mechanisms

These mechanisms are used to coordinate inter and intra organisational relationships thereby facilitating market success, incentive alignment, information sharing accessing resources, problem solving and increased competitiveness (Lazzarini, Chaddad, & Cook, 2001; Monczka, Petersen, Handfield, & Ragatz, 1998; Provan & Kenis, 2005; Ritter, 2007; Spekman, J.W., & Myhr, 1998; Wang & Wei, 2007; Wathne & Heide, 2004). They can however erode firm value. (Poppo, Zhou, & Zenger, 2008)

Stakeholder management seeks to engage stakeholders through various activities of relational management, negotiating and contracting to develop and implement an integrated firm strategy (Freeman & Cavinato, 1990). Firms may attempt to control for the effects of stakeholders (buffering) or engage in a strategic partnership

(bridging). This may involve stakeholder directorship (Lu & Horng, 2007), though this may contribute little to stakeholder performance (Hillman, Keim, & Luce, 2001).

Hill and Jones (1992) identified several interest aligning mechanisms and monitoring and enforcement mechanisms used for effective stakeholder management. Interest aligning mechanisms include (i) stock options and tax breaks to address managerial agency problems, (ii) absorbing ex-ante costs of contracts to avoid investment agency, (iii) bonding costs, such as warranties to secure consumer interests, (iv) mutual lock-in which includes mutual investments and the establishment of forfeitable bonds, especially in cases of high asset specificity.

On the other hand, monitoring and enforcement mechanisms includes (i) monitoring structures such as legislations and other monitoring institutions such as stock analysts and unions, (ii) the threat of exit by legitimate stakeholders and coordination mechanisms, such as unions.

The effectiveness of ‘threat of exit’ as a mechanism requires that stakeholders have access to cost-effective alternatives and a bonding mechanism that allows for abrogation of contracts where there is lock-in. Also, public relations (voice) may only be effective where there are legitimate stakeholders and where the reputation of offending parties can be damaged (Hill & Jones, 1992).

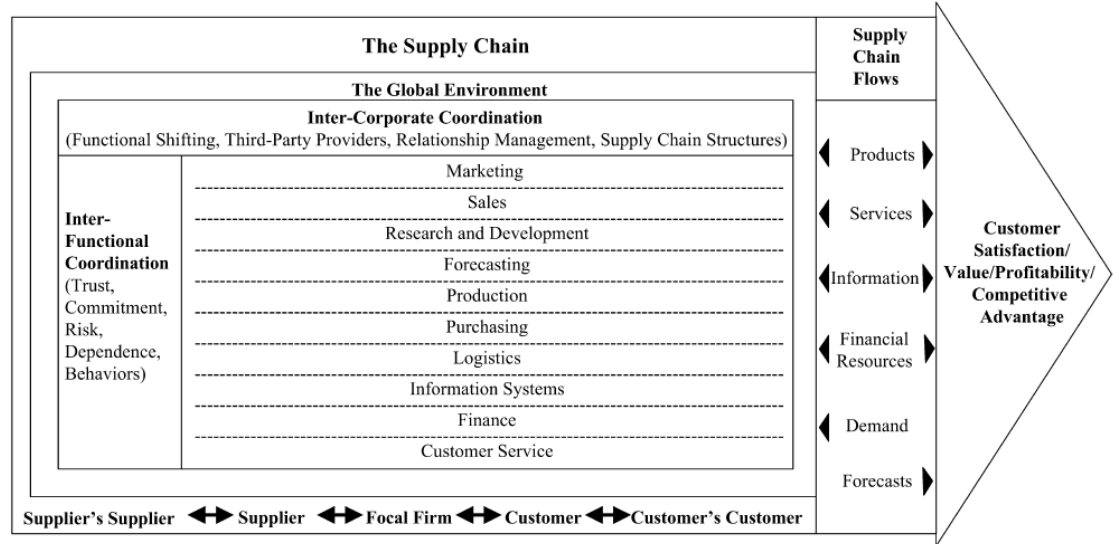
2.1.5.3.1 Supply Chain Management Mechanisms

Mentzer, DeWitt, Keebler, et al., (2001) defines SCM as “*a set of three or more entities (organizations or individuals) directly involved in the upstream and downstream flows of products, services, finances, and/or information from a source to a customer*” (p. 4).

SCM gains importance when competition move from inter-firm toward inter-chain competition, rather than through requires effective supply and value chain governance (Chen & Paulraj, 2004b; Spekman et al., 1998). It effective chain governance mechanisms will lead to customers and stakeholder satisfaction, competitive advantage and firm value (Ho, Au, & Newton, 2002; Mentzer et al., 2001;

K. C. Tan, 2001). A conceptual model of a supply chain management is presented in Figure 7 below. This model captures the critical aspects of value creation activities, product, financial and information flow and the supply flows and may operate at the direct, extended or ultimate levels.

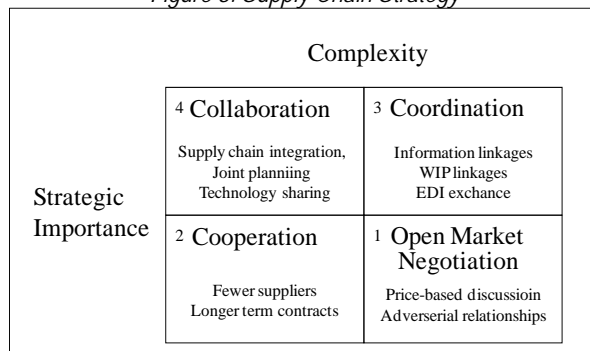
Figure 7: A Model of Supply Chain Management



Source: (Mentzer et al., 2001, p. 19)

SCM aims to increase the competitive advantage of partnering firms or individuals by reducing threats of opportunism, securing property rights, maximising flexibility and to facilitate learning (Boehlje, 1999; Palmer, 2002). Palmer (2002) argued that SCM success depends on the level of partner commitment, homogeneity of members and governance styles. Spekman, et al. (1998) classified supply chain strategy based on the level of strategic commitment of members, the strategic importance, and the financial or commercial complexity of the transacting relationship (Figure 8).

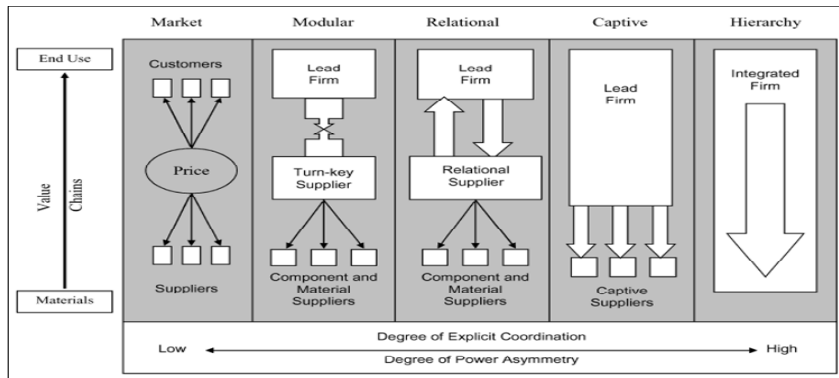
Figure 8: Supply Chain Strategy



Source: (Spekman et al., 1998, p. 634 & 639)

As competitiveness increases, firms move to tighter forms of SCM governance. Gereffi, Humphrey, and Sturgeon (2005) identified five (5) types of value chain governance, ranging from market to hierarchy along a coordination and power asymmetry (Figure 9). Each is further characterised according to the complexity of, ability to codify transaction and the supplier capability (Table 5).

Figure 9: Value Chain Governance Types



Source: (Gereffi et al., 2005, p. 89)

Table 5: Determinants of global value chain governance

Governance type	Complexity of transactions	Ability to codify transactions	Capabilities in the supply-base	Degree of explicit coordination and power asymmetry
Market	Low	High	High	Low ↓ High
Modular	High	High	High	
Relational	High	Low	High	
Captive	High	High	Low	
Hierarchy	High	Low	Low	

Source: (Gereffi et al., 2005, p. 87)

Alternatively, but in similar fashion, Boehlje (1999), proposed that choice of governance mechanism, will depend on the nature of asset specificity, task programmability and task separability in the inter-firm transactions. Based on these, he proposed the use of taxonomy for predicting the most appropriate choice from among eight mechanisms (see Table 6). Mentzer et al. (2001) identified other antecedents that influence governance structure, such as the including the firm’s SCM orientation, trust, commitment, interdependence, organizational compatibility and top management support.

Table 6: Alternative SCM Governance mechanism

Factors	Low programmability		High programmability	
	Low asset specificity	High asset specificity	Low asset specifically	High asset specificity
Low Non-separability	Spot market	Long-term contract	Spot market	Joint venture
High Non-separability	Cooperation or (strategic alliance)	Cooperation vertical ownership	Inside contract (hybrid)	Vertical ownership

Source:(Boehlje, 1999, p. 28)

Boehlje, Hofing, and Schroeder (1999) identified the several sources of value capture or decay along a supply chain. These include loss of property rights, substitution, replacement through technology, commoditisation as the product life cycle matures, and mitigation to avoid hold-ups.

2.1.5.4 Special Governance Structures

The above theories have implications for unique governance structures such as cooperatives, SDSs and state owned enterprises (SOE).

2.1.5.4.1 Cooperatives

The International Cooperative Alliance (ICA) (2007b), defines a cooperative as “... *an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise*”.

The governance of these organisations is based on the Co-operatives values of self-help, self-responsibility, democracy, equality, equity and solidarity, honesty, openness, social responsibility and caring for others (ICA, 2007a). Furthermore, the Australian Centre for Co-operative Research and Development (AC.C.O.R.D) (2002) identified seven (7) principles which guide the cooperative movement, including; voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education; training and information; co-operation among co-operatives, and concern for community.

These structures are generally formed as a solution for socio-economic difficulties including market failure among their members. Therefore its roles may include reducing market risks, increasing economies of scale, reducing transaction

costs, increasing revenue, creating needed services where none exists and accessing financing (Bogetoft & B., 2007).

Governance cooperatives are effective in internalising high transaction costs by vertically integrating to overcome inefficiencies otherwise faced by individual member (Gall & Schroder, 2006; Nilsson, 2001). However, Nilsson (2001) noted that cooperatives are deemed inefficient from an agency and property rights perspective due to vaguely defined property rights, difficulty in raising equity and sub-optimal use of resources due to the common property principle.

The increasing competition caused by agro-industrialisation requires that cooperatives must restructure to become more entrepreneurial and to address their investment problems (M. Beverland, 2007; Chaddad & Cook, 2004; Evans & Meade, 2005; Nilsson, 2001).

Cooperatives have been classified in varying different ways (A.C.C.O.R.D, 2002; Nilsson, 2001). From an investment or financing standpoint, Chaddad and Cook (2004) developed a typology of alternative cooperatives structures based on their level of proportional investment and ownership rights. The main categories of cooperatives identified were:

1. Member-owner cooperatives with non-transferable shares, including participation units, cooperative capital units and redeemable preference shares
2. New generation cooperatives with transferable shares, including non-controlling joint venture strategic alliance, non-operating trust companies, and subsidiaries formed through the transferring of cooperative assets
3. Investor share cooperatives, maintains traditional shares and raises non-member equity through preferred, non-voting stock which are redeemable and transferable
4. De-mutualised or ex-cooperatives which have converted to public liability companies, through the conversion of shares to unrestricted common-stock ownership.

2.1.5.4.2 Single Desk Sellers (SDS)

Single Desk Sellers (SDSs) refers to a legislated monopoly arrangement where trade is controlled via a single institution or desk. Theoretical literature on SDS as a governance mode is sparse at best. Examples of these are commodity boards such as Outspan of South Africa (Mather, 1999), the Canadian Wheat Board (Brooks & Schmitz, 1999), the Australian Wheat Board, Rice Growers Cooperative Limited (Griffith & Mullen, 2001). For purpose of this study, an SDS may provide a governance solution in a similar way to that of cooperatives. However, the legislated mandatory roles may also result in lower transaction costs as it minimises the ex-ante cost of information search contracting, and heighten competition at the domestic level.

2.1.5.4.3 State Trading Enterprises (STE)

An SDS may also be a State Trading Enterprise (STE). An STE is defined as “government and nongovernmental enterprises, including marketing boards, which have been granted exclusive or special rights or privileges, including statutory or constitutional powers, in the exercise of which they influence through purchases or sales the level or direction of imports or exports” USDA (1997), Cited in (Dong, Marsh & Stiegert 2006, p. 90).

STEs are important in that they have the potential to distort trade through price distortion and to reduce competition (Bacharach, 1989; Brooks & Schmitz, 1999; Lavoie, 2005; McCorriston & MacLaren, 2005, 2007; Schmitz & Schmitz, 1999; Veeman, 1998). From a strategic management perspective, an STE that performs an SDS function may experience double agency problems, investment, overinvestment, overinvestment by stakeholders and government.

2.1.5.4.4 Governance Problems in Cooperatives, SDSs and STEs

SDSs and cooperatives encounter similar problems as identified in aforementioned governance theories, but may take on unique dimensions due to their ownership and control characteristics.

2.1.5.4.4.1 Common Property Problem

New members (patrons) of a cooperative may join with no or a small fee and yet benefit fully from equity investment. This is because residual property rights is vested in the cooperative society (common property), as opposed to the individual. As a result, there is equity dilution and a disparity between member's equity contributions and investment returns. Furthermore, equity (however small) is not transferable. These characteristics tend to encourage a free-rider attitude, where members invest minimally in the cooperative and have a tendency to make decisions in favour of maximum short-term cash flow to members, and sub-optimal resource allocation (Nilsson, 2001; Ortamann & King, 2007; Vitaliano, 1983). However, Borgen (2004), argued that this assessment is unfair, and that the performance should instead be evaluated based on the member-user cooperative principle, rather than from the perspective of an investor.

New generation cooperatives have solved this problem by issuing tradable and redeemable residual rights (shares) (Chaddad & Cook, 2004; Gall & Schroder, 2006).

2.1.5.4.4.2 Decision Problems

Four decision related problems emerge from the free-rider problem above. These are the horizon, portfolio, follow-up, and influence-cost problems.

Firstly, in the absence of an established equity-market, members cannot engage in the transfer or realisation of share value. As such, members can only plan for the period that they are still members of the cooperative – which may be shorter than the productive life of any specific investment. This is compounded by the differences in the planning horizons and expectations of individual members, management and board members. As a result, it may be difficult to make efficient collective decisions regarding investments that may provide benefit which are beyond the individual patrons' planning horizons (Cook, 1995; Nilsson, 2001; Vitaliano, 1983).

Secondly, patrons may also have different risk/reward preferences (portfolio problem) the decision regarding investments and risk reduction strategy may be a difficult, and conflict laden. This difficulty may lead to economically inefficient portfolio selection (Borgen, 2004; Cook, 1995; Vitaliano, 1983).

A third problem is that of horizon problems. The absence of property-rights may create disincentives for members of Mutuals to monitor agents and can result in weak principal-agents interest-alignment mechanisms (Borgen, 2004). This increases the opportunity for management to act opportunistically.

The fourth problem is that of influence-cost, which relates to the self-interested lobbying activities of members to influence how decision-makers allocate resources and invested (Cook, 1995; Cornforth, 2004). State owned SDSs might be targeted with such behaviour, by influential blockholders such as government. The creation of an organisational space (physical and programmatic) enhances the participation of members in decision-making (Gorton & Schmid, 1999)

2.2 Empirical Findings

2.2.1 Strategy

The empirical findings relating to the choice of competitive strategies vary. For example, Spanos, Zaralis, and Lioukas (2004) found that managers of Greek manufacturing firms preferred mixed competitive strategies, while their US and Japanese counterparts firms preferred a cost-leadership strategy (Song, Calantone, & Di Benedetto, 2002). Acquah and Yasai-Ardekani (2008) asserted that Ghanaian companies which pursued either mixed or differentiation strategies performed better than those which implemented only the cost-leadership strategy. However, the ‘stuck in the middle’ approach was inferior to either of the pure strategies.

Song et al (2002) found that differentiation was likely to be chosen when buyer-power, the threats of substitution and new entrants and the competitive intensity were high. Conversely, this choice was less likely when there was high buyer power. The threat of potential new entrants did not affect the choice of this strategy. In line with the normative literature, Ward and Duray (2000) found that the differentiation-performance relationship was mediated by a quality-based manufacturing strategy. In other studies, flexibility was found to be the mediating variable in uncertain environments (Nembhard, Shi, & Aktan, 2005; Swamidass & Newell, 1987). However, in a cross-

industry study, Pagell and Krause (2004) found no relationship between these constructs.

This finding supports that of an earlier study of manufacturing firms in the United Arab Emirates, by Badri, Davis, and Davis (2000). They found that successful firms responded to the higher levels of environmental dynamism (including those relating to laws and regulations) by differentiating their products through delivery and quality, rather than by pursuing cost reduction strategy. Successful firms also responded to a shortage of skilled labour by adopting higher levels of operational flexibility. The choice of this strategy was unaffected when there were high levels of threat associated with potential new entrants (Song et al., 2002).

Song et al (2002) also found that managers of US and Japanese were likely to pursue a cost-leadership strategy when buyer power and the threat of substitution are high, and high intensity of competitive rivalry conversely (Song et al., 2002).

Even when managers preferred mixed competitive strategies, better performance was achieved when the low cost strategy one of the dominant strategies (Spanos et al., 2004). For example, Finney, Campbell, and Powell (2005) found that low cost strategy resulted in more efficient resource management and better financial performance. However, contrary to the normative theory, some studies reported better performance with the 'stuck in the middle' when differentiation is beyond the capabilities of the current competitors and where there are no tradeoffs between the cost and differentiation (Hunt, 1999; Murray, 1988).

Rhee and Mehra (2006) found that the competitive strategy moderated the relationship between functional level strategy and performance, but that this was depend on the nature of the strategic fit. Competitive strategy also influences functional strategy and performance, through an indirect effect –being mediated by manufacturing strategies (2008; Ward & Duray, 2000). Therefore, a misfit between the environment and competitive strategy can result in poor financial between (Ward & Duray, 2000; Zott & Amit, 2008). A lack of awareness, incompetence, or a deliberate attempt to retain a previously successful model (inertia theory) can result in dynamic misfits as the firms fail changes in line with its environment.

While industry-characteristics partially influences profits, this depends on the ability of the firm to appropriate this profit through the strategic manipulation resources internally as well as in the marketplace (Spanos & Lioukas, 2001). Hansen, Dibrell, and Down (2006) found that market orientation positively influenced firm strategy and performance only if it was associated with channel differentiation. Conversely, in the absence of this orientation, firms experience positive performance if they pursue a low-cost strategy.

Yin and Zajac (2004), found that the structure-strategy fit influenced performance among single-industry US firms between 1991 and 1997. They found that company-owned stores that pursued pure strategy experienced superior performance. Stores that pursued the mixed strategy did not perform as well as stores pursuing pure strategies. However, when mixed strategy was pursued, stores with a franchise structure performed better than company-owned structure.

2.2.2 The Governance - Performance Relationship

A review of the extant literature demonstrates significant relationships between governance and performance. For example, Palmer (2002), identified the governance construct as the strongest influencer of effectiveness among some UK cooperatives.

The majority of authors have reported a positive influencing effect of governance on performance (Baysinger & Butler, 1985; Claro, Hagelaar, & Omta, 2003; Coles et al., 2001; Cuervo & Villalonga, 2000; Hillman & Keim, 2001; Kiel & Nicholson, 2003; Murphy & McIntyre, 2007). However, the literature also illustrates cases of weak or no association between the two constructs (Burton, 2000; Dalton et al., 1998; Sanchez-Ballesta & Garcia-Meca, 2007).

The difference in the findings were often attributed to the different research context, including antecedent and context variables of governance which moderated or mediated the relationships (Hall & Saias, 1980; Hutzschenreuter & Kleindienst, 2006). This highlights the importance of defining the context to explain one's findings. Important contextual variables included:

6. Country settings (Mueller, 2006), ii) regulation (Qu, Ennew, & Thea Sinclair, 2005; Udayasankar & Das, 2007)
7. Strategy and strategic process (OAS, 1987; Olson, Slater, & Hult, 2005; Prescott, 1986; X. Yin & Zajac, 2004; Zott & Amit, 2008),
8. Firm type (public or state ownership) (Goldeng, Grunfeld, & Benito, 2008), and
9. Board structure and demographics, (Bennedsen, Kongsted, & Nielsen, 2008; Coles et al., 2001; de Andres et al., 2005; Ingley & van der Walt, 2005; Kang & Zardkoohi, 2005; Luoma & Goodstein, 1999).

When optimised, governance mechanisms, have the potential to increase long term efficiency (Coles et al., 2001), though , if poorly implemented, can erode firm value (D. J. Denis, Denis, & Sarin, 1997; Mueller, 2006). For this reason, some mechanisms are more appropriate than others in particular circumstances (Fong & Tosi, 2007). For example, while CEO salary may be an effective alignment mechanism it may result in risk-avoidance and shirking if it is too closely linked with the performance of riskier, but potentially better long term projects (Coles et al., 2001)..

In cooperatives and mutuals, governance problems may emerge from a mismatch between the specific choice of ownership structure and the specific strategic intent of the (member) investor (Borgen, 2004). This may also result from vague property rights and the common-property-related problems (J. Tan & Tan, 2005; Toms & Filatotchev, 2004b; Trienekens & Beulens, 2001) .

Governance failure occurs when the mechanisms for monitoring and controlling fail to contain costs and or add value to a firm. From a theoretical standpoint, Cooperative associations fail when they cannot meet the objectives correcting market failure while its members remain passive about their investor role. Such cooperatives are characterised by weak monitoring and marketing functions, inefficiency and capture by management or board and a loss of control by members of that organisation (Nilsson, 2001).

Gulati & Nickerson (2008), concluded that the threat of ex-ante opportunism in contract renegotiation, the firm's adaptability and cognitive ability of managers to

coordinate this adaptation all constrained component suppliers' ability to adapt different modes of vertical relationships.

Aulakh and Gencturk (2008), found that long-term contracts, rather than market or hierarchies were the optimal mechanisms for governing importer-exporter relationships. The antecedents influencing the contract-performance relationship were (i) relationship factors, including exporter dependence, relationship length, (ii) product-market factors, including market volatility, product standardization, and (iii) exporter related factors, including exporter's host market experience and export intensity.

2.2.3 Boards

Boards have been found to positively impact on firm performance by solving various governance problems including those related to agency and transaction costs (Nag et al., 2007; Nickerson, Hamilton, & Wada, 2001; Nilsson, 2001). (John & Senbet, 1998), though some empirical research found little or no relationship between performance and overall board composition, leadership structure independence (Bhagat & Black, 2001; Burton, 2000; Dalton et al., 1998; Klein, 1998), board diversity (Filatotchev & Toms, 2003) and board size (Kiel & Nicholson, 2003).

Nicholson and Kiel (2007) tested the relationship between board demographics and performance from various theoretical perspectives. They found that none of the theories was adequately able to predict or describe this relationship. No consistent relationship was found between, outsiders and reduced agency costs (agency theory), insiders and value addition (stewardship theory) or links to external resources and firm performance (resource dependency theory). The individual theories were weak predictors because they focused too narrowly on single roles of the board, at the expense of a holistic view. As a result, the authors proposed the use of a multi-theory framework, a process oriented approach, the case context to understand how boards add value.

The contingencies that shape the decisions regarding Boards structure vary. Boone, Field, Karpoff, and Raheja (2007) found that antecedents of board composition to be numerous and appear idiosyncratic in public US companies.

Kiel and Nicholson (2003), in a study of Australian firms, found a negative relationships between board size and firm performance, and between the proportion of inside directors and market based performance, but not on the accounting based measure. They postulated that the board size - firm performance relationship might have inverted “U”- shape. This argument supports a similar finding by John and Senbet (1998). de Andres et al.(2005), found a similar relationship among non-financial OECD companies regardless of the firm size, board composition, or country. Haniffa and Coles et al (2001), found a weak negative relationship between outside directors. Similarly, Hudaib (2006), found a positive relationship between board size. However, larger boards were both less effective in carrying out their monitoring functions, and more costly - due their large compensation packages and incentive to shirk their responsibility. Boone, Karpoff, and Raheja (2007) found that board independence was higher in larger firms, where managerial agency is more likely, and less independent in smaller firms and when the CEO was more influential.

The level of board independence is another major influence of board and firm performance. A positive relationship was found between insider directors and firm performance among US and UK firms (Bhagat & Black, 2001; Burton, 2000; Klein, 1998). In the latter study, this was found in US corporations experiencing low profitability. Toms and Filatotchev (2004b) found that the absence of outside directors led to less independent scrutiny, short-term strategies and firm failure. Ibrahim, Howard, and Angelidis (2003) noted that outside directors were more inclined to exercise more discretionary corporate responsibility and less on economic performance.

The presence of outside directors may influence a firm’s performance. Toms and Filatotchev (2004b) found that the highly resource dependent firms in the early industrialisation period (1830s – 1860s) tended to have transparent governance structures that facilitated external scrutiny by local creditor’s and active participation of shareholders. However, as firms became more resource-independent and less reliant on commercial lenders, the governance mechanisms became less transparent when the oversight function was carried out interlocking directors from the firms’ networks. This facilitated opportunistic behaviour, such as continual investment in obsolete equipment and technology, lack of growth in the firms’ resource base, overcapacity, limited development of new managerial talent, and inactive shareholders. As firms struggled to survive in an oversupplied, low profit market, the responses of interlocks were to secure

cash flow by 'milking' the assets, and price fixing through collusion via the use of an industry association mechanism. Even where firms were not part of the hierarchy, they were controlled through contracts, organised by interlocks.

As a contrast to the above outcome, some firms were successful in that, while maintaining their interlocking directorship, they were able to extend their resource base through diversification and the use of outside financiers, thereby making their network more heterogeneous, transparent and accountable (Toms & Filatotchev, 2004b).

Miwa and Ramseyer (2005), found that in small a medium-size companies, board vigilance in carrying out their monitoring function was critical for increasing CEOs effort and commitment. Brunninge et al (2007) found that despite the general trend of slow adoption of strategic change, that it was partly overcome when there was a presence of outside directors.

Kang and Zardkoohi (2005) found that two-tiered boards were favoured among European firms, while single tiered board models are preferred in Japan.

Dalton et al (1998) found no significant relationships between board leadership structure on firm financial performance. Similarly, Haniffa and Hudaib (2006), found that dual-leadership firms did not perform as well those with separated leadership structure. These differences may be explained by the findings of Kang and Zardkoohi (2005), who found that duality antecedents which facilitated performance were those related to rewarding good CEO performance, building confidence among stakeholders and for building agility in hostile and resource scarce environments. Conversely, duality may not add firm value if it is simply an imitation. Furthermore, duality may increase agency problems and erode firm value when it is implemented simply as an imitation or is wished by a powerful CEO.

The presence of blockholders appeared not to influence performance directly. Thomsen, Pedersen, and Kvist (2006) found no relationship between block-holder ownership and performance among Anglo-American firms, but found a significantly negative one for firms in continental Europe.

Sanchez-Ballesta and Garcia-Meca (2007) found no significant relationship between ownership concentration and firm performance, though it resulted in higher levels of performance in countries where ‘principal-principal’ agency³ were prevalent. They interpreted this as proof that large shareholders are active monitors and that they do contribute to increase firm-profitability. This finding, was in some part influenced by the differences in the legal systems, given that block ownership in continental Europe tended to exceed the level at which firm value was maximized. In this context, the authors also pointed to the possibility of blockholders holding on to their shares in order to continue benefiting at the expense of minority, though minority investors may gain more than they lose in the case of excessive blockholder ownership.

The legal environment may influence board structure and performance. Luoma and Goodstein (1999) found that the legal environment partly influenced stakeholder-director inclusion on the boards of US firms, but did not on their inclusion in the board’s sub-committees. Booth, Cornett, and Tehranian (2002) found that board independence – among other characteristics - can be substituted by regulation to monitor and reduce managerial agency.

Regardless of the negative relationship between outsider presence and performance, firms benefit indirectly from their external links, experience and expertise (Haniffa & Hudaib, 2006; 2001; Nicholson & Kiel, 2007; Ogden & Watson, 1999).

2.2.4 Supply Chain Governance

As the competitiveness in the agribusiness environment and commodity chains intensify, so does the governance dynamics between transacting parties. Firms have often attempted to manipulate the market environment by adopting alternative governance mechanisms and controlling market shares to facilitate greater market power and therefore better rents for individual chain members. However, evidence suggests that the latter strategy may not necessarily result in a positive outcome (Fitter & Kaplinsky, 2001; Ponte, 2002).

³ Situation where conflicts emerge due to diverging views of two or more categories of principals

Firms have been able to exploit additional rents when managers make inefficient decisions due to bounded rationality and uncertainty (Amit & Schoemaker, 1993), as well as from inter-chain - rather than inter firm competition (van de Ven, 1992; Veeman, 1998).

Fitter and Kaplinsky (2001) and Ponte (2002) examined the power dynamics between buyers and suppliers in the global coffee commodity chain and its relationship to rent-extraction along the value chain. Prior to 1989, the International Coffee Agreement facilitated a power balance between these groups. However, its subsequent collapse resulted in a power imbalance skewed in favour of the buyers. This was facilitated by loss of the coffee suppliers' primary tool of scaling up (marketing boards), oversupply and commoditisation of the bean trade. Conversely, on the demand side, the coffee market was increasingly becoming more differentiated, even while importers roasters and retailers colluded to avoid competing against each other exerted downward price pressure on producers.

Producer-suppliers in turn attempted to rebalance this dynamic and extract greater rents by removing excess supply through the creation of supply cartels. The strategy was not very effective, given do to a lack of cohesion among different suppliers. Subsequently, both suppliers and buyers used voluntary regulatory systems to coordinate the supply chain (Muradian & Pelupessy, 2005). However, this did not necessarily lead to efficient allocation of rents to producers upstream.

The SDS as a governance mechanism, have solved for market failure on the domestic front through scaling-up. However, this may not translate to effective strategy in the consumer market. Chang, Martel, and Berry (2005) found that the Australia Wheat Board (AWB) - a Single Desk Seller, was unable to price-discriminate by leveraging increased market shares, since this did not lead to increased commodity prices. An alternative price-discriminate strategy used by the Canadian Wheat Board (CWB) was that of product differentiation, where it charge different F.O.B. prices for wheat quality (Lavoie, 2005).

Li, Ragu-Nathan, Ragu-Nathan, and Rao (2006), found that the application of supply chain (strategic supplier partnership, customer relationship, the level and quality

of information sharing, and postponement), directly influenced firms' market and financial performance and competitive advantage (price and cost, quality, delivery dependability, product innovation and time to market)

Relational governance mechanisms (such as SCM) may either drive costs or increase product value at the transactions, business and dyadic levels (Claro et al., 2003). Joint problem solving between network partners increases firm efficiency because it is positively related to sales growth & perceived satisfaction. The converse is true with joint planning (Claro et al., 2003).

Claro et al.(2003), found that joint planning and problem solving both influenced the growth rate of firms and perceived satisfaction among a network of Dutch plant and flower growers. Joint planning was positively influenced by shared information, physical transaction-specific investments and inter-organisational trust, while interpersonal and inter-organisational trust positively influenced joint problem solving. These firms avoided complex safeguarding mechanisms by pursuing fixed line economic-exchange and physical transaction specific investments. In this study, trust was modelled as an antecedent of relational governance and performance, although it may have been influenced by the performance variable.

2.2.5 Financing strategy

Debt equity was a financing strategy pursued by some state owned SDSs, however, this was not a popular mechanism in developing countries (Haniffa & Hudaib, 2006; Young, Peng, Ahlstrom, Bruton, & Jiang, 2003). This was because these firms were able to access soft-financing through governmental sources (Faccio, Masulis, & McConnell, 2006). External equity financing may also be indirectly beneficial as it enhances accountability and transparency in decision-making which can come from the independent external scrutiny of network partners (Toms & Filatotchev, 2004a). Alternatively cooperatives and former state boards which have sought financing through ownership (equity) restructuring (Chaddad & Cook, 2004). Examples of these included:

10. Proportional investment entities (Dairy Farmers of America).

11. Member Investor entities using participation units (Campina Melkuine dairy cooperative in the Netherlands), cooperative Capital Units (Walgett Special One Cooperative of Australia), and redeemable preference shares (Fonterra of New Zealand).
12. Capital seeking entities strategic alliances (Dairy Farmers of America), trust companies (Diamond Walnut Capital Trust of California) and subsidiaries (Kerry Groups plc of Ireland).
13. Investor share entities preferred stock (CoBank of Denver, USA, non-voting common stock (Saskatchewan Wheat Pool).
14. Proportional investment (Campina Melkuine dairy cooperative in the Netherlands).
15. Investor share entities and investor participations shares (Farmer Controlled Business of the UK).

Kroll, Walters, and Wright (2008) found that for firms engaging in acquisitions, director's prior experience in the firm's target industry, and with prior board experience with acquisitions are associated with significantly higher returns.

2.2.6 Strategic Management in Developing Economies

There is an acute absence of peer-reviewed literature relating to the strategic management among firms in St. Vincent and the Grenadines (SVG) or other Caribbean Islands. However, there were interesting findings from developing economies, which may be instructive to the SVG setting.

Hoskisson (2000) found prevalence hybrid hierarchical firms, which often pursued unrelated diversification in emerging economies. These characteristics were as a direct result of underdeveloped capital, labour and managerial markets, and a difficulty of following-up contracts. It is likely that the managers in emerging economies may have limited cognitive abilities and mental models, given that the absence of managerial skills and knowledge of market-based management. These authors also found that poor external monitoring was due to the resistance to external monitors by insiders, lack of information and expertise by investor. They also pointed

the need to go beyond principal-agent incentive alignment and recruit competent managers (Hoskisson et al., 2000).

Chacar and Vissa (2005), examined the differences for the performance efficiency in India (developing country) and US (developed country) manufacturing firms. They found that while no differences between the two categories, regarding performance and value-eroding drivers, that, poor firm performance persisted longer in emerging economies. Furthermore, poor performance persisted longer for those firms affiliated with business groups and firms that are subsidiaries of foreign Multi-national Corporations. They also concluded that market governance is likely to be more efficient than alternative governance mechanisms - even in emerging economies.

SOE may become inefficient when they pursue inefficient political strategies, rather than business objectives. Privatisation as a strategy is aimed at making the firm more efficient (Boycko, Shleifer, & Vishny, 1996; Shleifer, 1998).

Rodriguez, Espejo, and Cabrera (2007), found that a double agency problem existed between government and managers on one hand and between itself and the public on the other.

Dharwadkar et al.(2000), found that the adoption of appropriate ownership, corporate structures may reduce post-privatisation managerial agency problems associated with weak governance mechanisms and limited protection of minority shareholders. They cautioned against the wholesale adoption of Anglo Saxon type governance solutions from developed countries as a panacea governance problems in developing countries (Dharwadkar et al., 2000). Two of these identified by L. D. Parker (2007) were the need to adopt competition policies and regulation and to complement privatisation with broader structural reform.

2.2.7 Privatisation

The reasons for privatisation are many, but are generally aimed at improving productivity and reducing cost of production (D. Parker & Kirkpatrick, 2005). More specifically, Boubakri, Cosset, and Guedhami (2008), pointed to some reasons for

privatisation in developing countries. These include reducing budgetary deficits and public sector intervention in the economy, strengthening the private sector, reducing and stimulating capital-market development. However, they also found that Governments in developing countries have tended to shy away from privatisation, and that where they did, the preferred route was private divestitures to facilitate revenue rather than control privatisation.

Post privatisation performance varies depending on a number of contingency factors. Some studies found that firms which retained their political connections post privatisation did not perform as well as their counterparts which severed this connection. For example in one study, Andrews and Dowling (Andrews & Dowling, 1998) found that these firms were unable to reduce agency costs, while Faccio et al (2006) in another study noted lower return on investments. Contrary to these findings however, Gupta (2005), found that partial privatisation in some Indian firms led to positive firm performance, due to the influences of CEO incentive-alignment (better rewards) and the monitoring role of the stock market. Similar findings were found by Gulati and Nickerson (2008), although performance improvements was more evident among firms which were regulated, those in developing -as opposed to transitioning - economies and those which engaged in post-privatisation restructure after.

Opposite to the normative literature, (Omran, 2004) found that privatisation in some privatised Egyptian did not result in significantly better performance than those, which remained SOEs. He postulated that the improved performance of these newly privatised firms might have indirectly influenced improved performance in SOEs. Even so, he noted that improvements were related to debt, employment and profitability, but not in terms of total output.

Changes to firm strategy, the nature of the management, governance, administrative and incentive mechanisms, performance and the use of formal; evaluation also influenced the post-privatisation-performance relationship (Cuervo & Villalonga, 2000; 2007).

2.3 Summary and Integrated Theoretical framework

This chapter addressed theoretical and empirical literatures which were central to answering the research questions relating to the governance structure-performance relationship.

The first section related to the normative, descriptive and prescriptive theories relating to the main constructs of strategy and governance structure; their antecedents and their impact on performance. Strategy was seen as a multi-paradigmatic construct which can be evaluated through the analytical lenses of the linear adaptive and interpretive and or ecology perspectives. From an adaptive perspective, strategy was defined as being, “concerned with the development of a viable match between the opportunities and risks present in the external environment and the organization's capabilities and resources for exploiting those opportunities” (Hoffer, 1973, as cited by Chafee 1985 p.91). Firm performance is enhanced when there is an optimal fit between the choice of strategy and environment. As such, the measurement of this fit can be carried out using an integrated framework which addresses both internal and external domains, as well as on the content and process of fit.

A brief review of the definitions and analytical frameworks for evaluating strategic management was conducted. The organisation-environment-strategy-performance (OESP) model developed by Farjoun (2002), was identified as an appropriate framework for evaluating strategic management in a dynamic framework.

Competitive strategy was identified a key strategy which influences firm performance as well as the business, functional and manufacturing level of strategy.

The second section in the strategy review examined the construct of governance-structure. This construct was also a multi-paradigmatic with different definitions. And examination of the property rights, agency, transaction-cost, stakeholder, and resource dependency and resource base view theories of the firm was conducted. It was determined that multi paradigmatic constructs are most suitable for studying the effects of governance structure on performance. This will be critical for this study, since the SDS structure operated both as an internal and an external mechanism and included AIA vertically integrated set of stakeholders. Hence, apart from the traditional of agency, property rights and transaction cost theories, stakeholder and dependency

theories were important to assist in achieving a holistic picture of governance structure-performance dynamics.

2.3.1.1 Theoretical Framework

The central theory of interest was the relationship between the governance structure and performance of the AIA over the last twenty years. To operationalise this theory, other variables were identified in the literature, which were proven to influence this relationship. As such, contingency and moderating variables were included. Relationships were built into the model to account for the dynamic effects, which may have occurred as the AIA co-evolved with its environment, and for the impact of firm performance on the relationship. The integrated framework is discussed below.

The main constructs which influenced the choice of governance structure and mechanism were the upstream and downstream market conditions, including the level of uncertainty relating to the demand and supply structure, prices of raw materials and finished product, and technology. Additionally, the context variables relating to the country (labour equity and market characteristics, socio-political and economic conditions, substitutes, and legislation) and the firm (industry characteristics, firm size etc) were important variables that influenced the choice of structure.

As discussed in the literature, although the analytical models by Rajagopalan and Spreitzer (1997) and Badri, Davis, and Davis (2000) were robust for testing the governance structure-performance relationship, they lacked some important constructs of interest. Furthermore, it is perceivable that it would have been difficult to measuring some variables. The model used by (Farjoun, 2002) was more suitable for this study, since it facilitates analysis of dynamic co-evolution, in that it deliberately maps the performance feed-back on the environment, strategy and governance structure.

However, the nature of the relationship between these constructs is hotly, in that it is highly debatable whether strategy follows structure or vice versa (Chandler, 2003; Hall & Saias, 1980). This study adopted the view that over the long-term governance structure follows competitive strategy, thereby making strategy an antecedent of structure - though as a moderator between environments and firm structure. However,

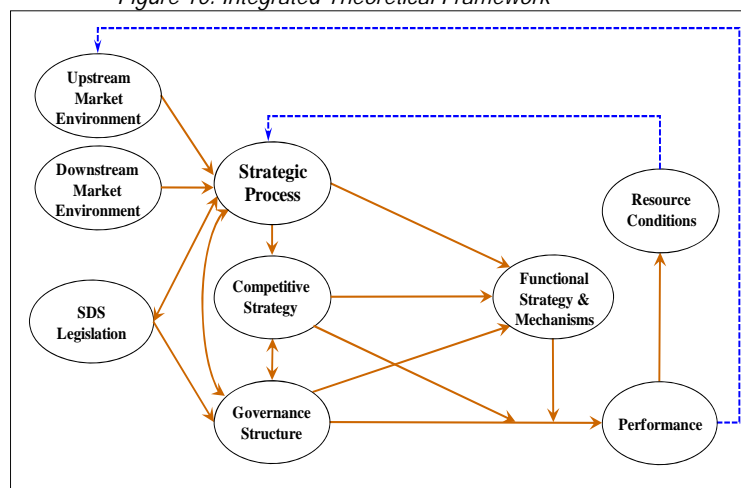
following Amoako-Gyampah and Acquah (2008), it was assumed that the relationship between these variables is somewhat symmetrical in the way the environment shape them as well as in terms of their influence on performance. Endogenous moderators such as functional and manufacturing strategies and internal governance (Li et al., 2006) were assumed to be influenced by structure and strategy.

Amoako-Gyampah and Acquah (2008) considered the relationship between competitive strategy and manufacturing (functional) strategy and their effects on performance, but did not clearly specify environment context. To facilitate the analysis of performance on the structure-performance relationship, feedback loops were integrated into the model. This took into account the impact of the AIA’s performance on its resource characteristics (Toms & Filatotchev, 2004b), and future choice of strategy and on the performance of upstream suppliers.

Figure 10 maps out the main constructs and relationship in the theoretical framework which will guide the analysis of this study.

Dynamic nature of multiple framework being used because of difficulty of (Hoskisson et al., 1999)

Figure 10: Integrated Theoretical Framework



3 Research Setting – The Context

3.1 Introduction

The objective of this chapter is to provide a background, which will facilitate analysis within the specific context of the AIA. This context includes basic country information, the AIA's performance prior to 1976, and the legislated governance arrangement found in the 1976 AIA law. This is followed by information regarding the recent challenges facing the AIA and its responses. The chapter closes with a short synopsis of the major step between production of rhizome and sale of starch.

3.2 St. Vincent and the Grenadines

St. Vincent and the Grenadines (SVG) is a former colony of the British Commonwealth. It is a small archipelagic island state in the Eastern Caribbean, located north of Venezuela and Trinidad and south east of Florida and Puerto Rico (see Figure 12 below). The country is 344 sq. km. and has a population of approximately 109,000 persons.

Figure 11 : Map of the Eastern Caribbean and St Vincent



Source: Britannica.com 4

SVG is part of the Windward Islands⁵, and the Organisation of Eastern Caribbean States (OECS). The latter group is part of the East Caribbean currency union which uses the Eastern Caribbean dollar (EC\$), pegged to the US\$1: EC\$2.70. Both groupings pursue different forms of functional cooperation and economic harmonisation. SVG is also part of the Caribbean Community Common Market (CARICOM) (OECS + Barbados, Guyana, Jamaica and Trinidad). Commercial banks dominate the financial sector, as there is no stock exchange. There are no stock exchanges in the country.

St. Vincent has evolved from a mainly mono-crop agrarian economy to one that is service oriented, with tourism and construction being the major contributors to GDP. Despite the decline of agriculture to GDP, it contributes over one third⁶ of the income from exports. Agriculture is still very important for employment creation and poverty reduction especially in the rural areas.

The move toward full trade liberalisation has resulted in the erosion of preferential trade arrangements for commodities from St. Vincent and other African, Caribbean and Pacific (ACP) countries. As a result, the Government has sought to invest in diversification around banana. The investment of an EC\$8M IFAD-SCIPM and the EC\$11M diversification Unit in the ministry of Agriculture are testament to this focus. Many enterprises were targeted for commercial development, including arrowroot. Though it was in a state of decline, arrowroot was viewed as a commodity, which could potentially replace some of the anticipated loss of earnings from Banana.

3.3 The AIA Prior to 1976

The AIA has its early origins in the Cooperative Arrowroot Association of St. Vincent – a Single Desk Seller (SDS) was formed by farmers and incorporated by Law in 1931. Its main purpose was to overcome the problems of poor quality and underpricing, which these individual farmers were facing. The original legislation was based

⁵ Windward islands - Dominica, Grenada St. Lucia and St. Vincent

⁶ NIPI Key statistics

on the Canadian Wheat Pools Law (Rochin, 1980). This cooperative adopted different strategies over the years in order to meet its objectives. The more significant ones are summarised in Table 7 below.

Table 7: Major Strategy/Structure responses on the Association in its early years

	Problem	Policy/Strategy	Outcome
1931	Fragmented production, Low starch prices Poor starch quality	Formation of the Cooperative Arrowroot Association (Arrowroot Pool)	Increased production
Early 1950s	Declining Production due to increased competition for land by growing banana industry Cash on Delivery for Farmers	Higher prices Cash on delivery payment system Fertiliser credits Revision of Law (Act 15 of 1954)	Production rebounded.
1960s	Conversion of sugar cane lands, to arrowroot when the sugar industry was closed, precipitating over production in the face of market contraction Reduced revenue from sale of starch	Reduced rhizome prices to temper production. Borrowings through an overdraft facility using the stockpile as security	Production decline Increasing overdraft EC \$3M by 1969
Early 1970s	Increasing demand for starch (as an ingredient in carbonless paper manufacture)	Increased rhizome prices	Continued production decline
	unavailability of labour Shrinking production	Research in mechanised harvesting Repairing processing plants leasing Langley Park estate and subletting to growers Attempts at purchasing estate Higher wages for harvesters Pay the cost of trucking	Increased processing capacity Moderate increase in production Land acquisition rejected by Government Better attitudes to harvesting
1974 to 1976	Loss of processing capacity with the destruction of the San Souci factory and a subsequent decline in production Reduced processing capacity Government announced policy to re-establish the sugar industry and to close the Wallilabou arrowroot factory Continued production decline	Repair San Souci factory Payment of a bonus Joint Government/ AIA agreement to build new factory at Owia Revision of Legislation (Act 20 of 1976) to facilitate above	Greater Govt. involvement in AIA Establishment of Owia Factory More small holders automatically gained membership
1976-1979	Demand level off at 800,000 lbs Workers and farmer engaged in padding deliveries to earn higher revenues. Overdraft grows to \$500,000 Continued production decline	4 oz packs sold in the Caribbean Increased rhizome prices	Continued production decline

Source: Compiled from various archival sources, including (Davies, 1971; GOSVG, 1976, 1993; KAIRI, 2000; Martin, 1967; OAS, 1987; Olliverre, 1984; Rochin, 1980)

3.4 AIA Governance as prescribed by Act 20 of 1976

AIA Act (Act 20 of 1976) created the AIA to replace the Cooperative Arrowroot Growers Association - established through Act 19 of 1931 and modified in 1954 (Act 15) and 1966. This 1976 legislation changed the organisation from a self managed, owner-investor cooperative to a Type II State Trading Agency (Schmitz & Schmitz, 1999) or a State Owned Enterprise (SOE) (Goldeng et al., 2008). The 1976 Act brought about three major changes. Firstly, it facilitated more small farmers qualifying for membership (automatically increasing this from 32 to 174). Secondly, it allowed the Government and the AIA to construct the Owia processing factory at a projected cost of \$437,000. thirdly, it allowed the Government greater monitoring capabilities (Rochin, 1980). The 1976 Act lays out the functions of the AIA, and the roles and responsibilities of key officers and mechanisms for the smooth operation of the AIA.

3.4.1 Functions/Objectives of the AIA

The broad functions/objectives of the AIA according to the AIA Act (GOSVG, 1976) identifies the AIA's as; to promote agronomic research, industry development, and rhizome production, establishment and supervision of processing plants, controlling export marketing, trading in agricultural inputs for the benefit of arrowroot production, and the provision of loans for the production of arrowroot

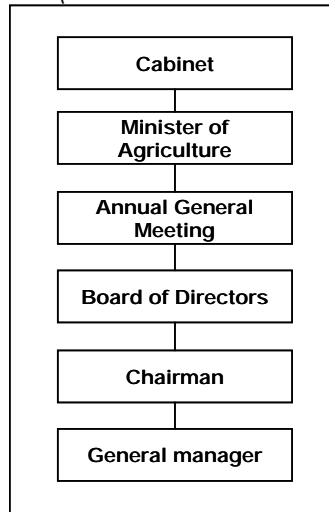
3.4.2 Vision/Mission Statements

Apart from the objectives, there is no statement of intent, vision or mission in the AIA Act.

3.4.3 Decision Making Authority & Responsibilities

The key decision makers in the AIA governance arrangement are the Cabinet, Minister of Agriculture, Annual General Meeting, the Board of Directors and the Manager. These are illustrated in Figure 12 below.

Figure 12 AIA Structure (Constructed based on Act 20 of 1976)



3.4.4 The Cabinet

16. The Cabinet is the ultimate decision making Authority of the AIA. Its role is all-embracing and requires that the Board (the Executive) seek its approval on almost every decision regarding the use of resources. It can also direct the Board or Management to implement any general terms or specific. It also considers the advice of the Board on several matters. As stated in Act 20 (GOSVG, 1976), the Cabinet must approve Board decisions pertaining to (i) Estimates of income and their sources; expenditure and purposes; and any additional expenditure exceeding that which was previously budgeted and approved (p. 14) , (ii) Appointment of the Manager (p. 10) auditors (p. 15), (iii) Establishment of a Reserve fund (p. 13), Pension fund (p. 14) and payment of gratuity of officers (p. 11), (iv) Payment of allowances for the Chairman, deputy Chairman and Directors (p. 14), and staff salary which exceeds \$6000 per annum (p. 10), (v) Transfer of an Officer and pensionable emoluments to or from the Public Service (p. 14) and (vi) appointment of directors in cases of non-election (p. 8).

3.4.5 Minister of Agriculture

The Minister of Agriculture's role according to the Act is one of monitoring and facilitating. According to the AIA Act, (GOSVG, 1976), The Minister's responsibilities include: (i) Approving loans for the AIA -using the AIA's property as collateral. Where this is done, the Minister of Finance may seek the approval of the House of Assembly

to guarantee such repayments (p. 13), (ii) receiving quarterly statements of deposit, loan, current accounts, use of expenditure as well as other required accounts, reports and statements requested (p. 14), (iii) Receiving an annual report from the Manager and subsequently laying this in the House of Assembly. This report details the operations, financial status and the Audited statement of accounts of the preceding year (p. 14).

3.4.6 General Meetings

The General meeting of the AIA comprises members (rhizome producers who can produce a minimum of 12,000 lbs of rhizomes or 2000 lbs of starch) and the Board of Directors. The chairperson of the Board is the President of the AIA in this setting.

The AIA should hold two General Meetings in February and August (GOSVG, 1976, p. 18). At the meeting held in August each year, five (5) Directors are elected from the membership body and the audited financial statement presented. A special General Meeting may be convened based on the written request of 1/5th of members. Apart from these, the Law is silent on the other purposes of such meetings.

3.4.7 The Arrowroot Industry Board

Act 20 (GOSVG, 1976, p. 18) defines the Board of Directors as the Executive of the AIA, which comprises eleven (11) members. Five Directors are elected by Members at the AGM while Cabinet nominates a possible total of six (6) members, including three (3) ex-officio Directors – based on their professional positions at the Ministries of Finance, Agriculture and Trade) and three (3) nominated Directors. The Government also nominates the Chairman (President of the AIA), who may be selected outside of the previously mentioned members. A quorum of the board includes the Chairman and five (5) Directors.

The Board must seek Cabinet's approval on all major decisions as it carries out its role, which includes: (i) Considering and advising Cabinet on matters affecting the arrowroot industry, (ii) regulating and controlling the export of arrowroot products, (iii) Setting the grades and prices for rhizome and starch, (iv) publishing the annual register of members, hiring a General Manager and other staff that it deems necessary, (v) receiving reports from these personnel if desired, (vi) approving loans for growing

arrowroot, (vii) establishing any subcommittee it deems necessary, and (viii) making regulation (with the approval of the Governor General), which may facilitate the implementation of its functions.

3.4.8 Chairman of the Board

According to the AIA Act (GOSVG, 1976), the Chairman of the Board of Directors convenes and presides over meetings of the Board, and is the President of the Association. This person authenticates the seal of the AIA on all legal instruments through his/her signature as well we co-sign all other documents with the General Manager. The Chairman is required also to publish the register of members. Between Board meetings, he supervises the Manager and can issue instructions on behalf of the Board. All cheques must be co-signed by him.

3.4.9 General Manager

The General Manager is the Chief Executive Officer of the AIA and is responsible to the Board generally and the Chairman specifically. The duties of CEO involve administration of the production, tractor service, processing and marketing components of the AIA.

3.4.10 Grading and Other Committees

The AIA Act (GOSVG, 1976, p. 7), stipulates the establishment of a three-man Grading Committee, which is selected through a ballot. It inspects and assigns the grade for arrowroot product delivered to the AIA. The decisions of this committee are final. The Committee may establish any other committee it deems fit.

3.5 The AIA in Contemporary times (1980s-2007)

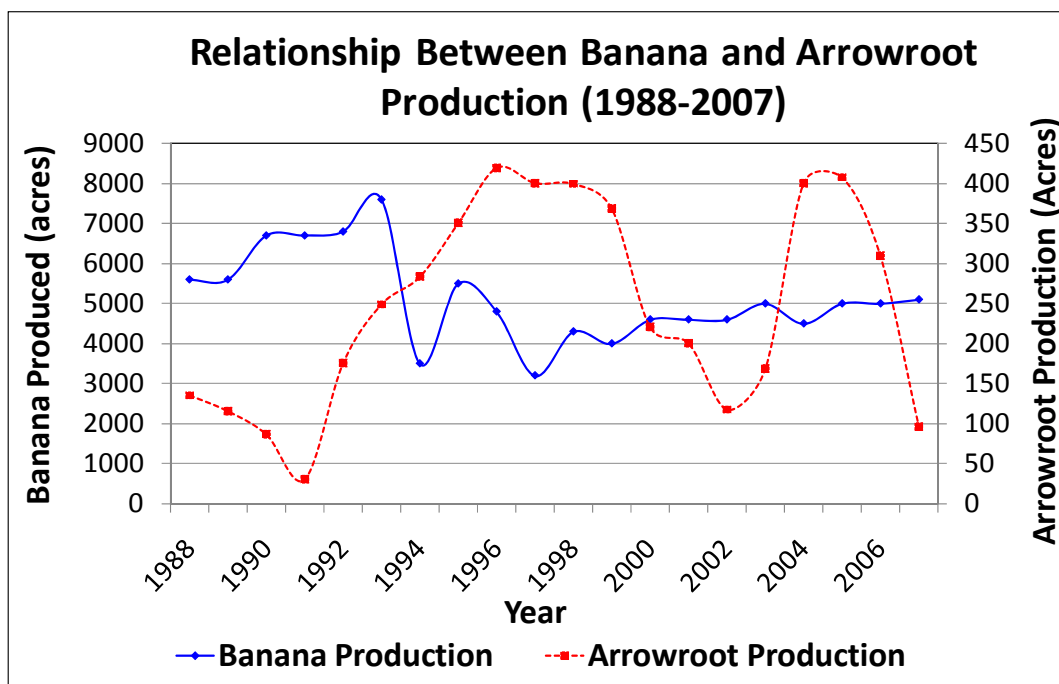
By the early 1980s, the AIA was in possession of a significant stockpile (3,000,000 Lbs by 1985) at a time when the global demand for starch was contracting. The hope was to sell this starch when the market prices were more favourable. During this time also, buyers were substituting arrowroot starch with less costly Asian arrowroot (from other plant sources), Brazilian arrowroot and tapioca (cassava) starch. The outsourcing of the marketing function to the East Caribbean Agency did not resolve

the stockpile problem. In fact, this Agency has since collapsed, leaving an unrecoverable debt to the AIA. By this time, the practice of financing its operations through an overdraft facility resulted in a significantly indebted AIA.

After failed attempts to sell this stockpile as food-grade starch, the AIA reverted to selling it as industrial grade starch at a significantly lower price than what obtained for the food grade starch. In the 1980s, demand for arrowroot starch grew once again as its unique qualities gained wide recognition within the food sector.

Since then, the AIA has been promoting the production of the crop. However, farmers were diverting to the production of banana, which was perceived to be more lucrative or ‘green gold’ as it was favourable described (see Figure 13 below). This crop provided higher income opportunities on a weekly or fortnightly basis. Furthermore, the arrowroot factory in Wallilabou was finally closed in 1987.

Figure 13: Banana production Compared with arrowroot production.



Source: FOASTAT for banana production statistics & combined KAIRI report and AIA records for arrowroot production

By the end of the 1990s, private millers at Mt. Bentick and at Colonarie also closed operations. The consequence of all this was that production was restricted to the North-eastern side of the country, closer to the factory at Owia as seen in Figure 14

below. The low production and sale of Arrowroot starch, which followed, resulted in significant declines in Arrowroot’s contribution to GDP, moving from 0.14 % in 1987, to 0.05 % in 2007. Table 8 presents the five-year averages of Arrowroot contribution to GDP and Agricultural earnings.

Figure 14: Arrowroot Production Activities in the early 1980s and in 2008

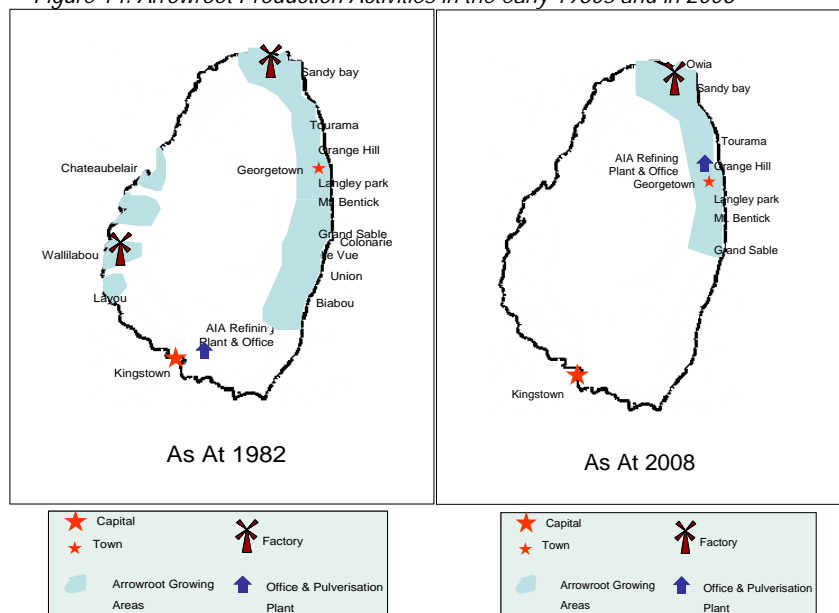


Table 8: 5-Year Averages of Arrowroot Contribution to GDP

5-Year Average	1988-1992	1993-1997	1998-2002	2003-2007
GDP (EC\$M)	448.85	601.11	765.86	1,017.85
Agriculture Earnings (EC\$M)	89.40	74.99	78.91	80.72
Average Agriculture Contribution to GDP (%)	19.99%	12.55%	10.32%	8.00%
Banana Earnings (EC\$M)	99.67	53.93	47.67	34.78
Banana Contribution to GDP (%)	22.32%	9.09%	6.26%	3.78%
Banana Contribution to Agriculture (%)	111.44%	71.33%	60.33%	27.04%
Arrowroot Earnings (EC\$M)	0.58	0.71	0.84	0.47
Arrowroot Contribution to GDP (%)	0.14%	0.12%	0.11%	0.05%
Arrowroot Contribution to Agriculture (%)	0.70%	1.00%	1.06%	0.59%

Source: calculated from ECCB Country data and AIA revenue data

However, despite the declining and miniscule contribution to GDP, it remained one of the few economic options for this section of St. Vincent, especially in the indigenous ‘Carib Community’, where the topography was very steep and the educational levels were low. It therefore represented an important source of employment and income generating activity for these peoples. The starch, especially the second grade ‘mudungo’ was also important in the local food culture of these people.

The recognition of arrowroot's importance to the economy was the motivation for continued efforts aimed at reviving the industry to attain 1960s levels of performance. Historically, and up to 2001, the activities relating to the implementation of these policies were aimed at factory refurbishments and several industry studies. A synopsis of these is presented in Table 9 below.

Table 9: Recent initiatives of the AIA to overcome problems in the arrowroot industry

	Problem	Policy/Strategy	Outcome
Early to Mid 1980s	Low production Difficulty in harvesting Low starch prices, Starch oversupply Growing debt Significant Accounts receivable	Stockpile starch(2,000,000 lbs by 1987 ⁷)	Continued over supply
		Hire Marketing Agent (ECA) to Sell off stockpile of starch as industrial grade starch in order to recover cost Negotiations with Italian firm to purchase stockpile at US\$1100/ton.	Partial reduction of stock pile
		Studies/Consultancies/Proposals Oct 1982 St. Vincent Arrowroot Industry End Use Study Marketing Study (Coopers & Lybrand/USAID) 1984 Crisis in the Arrowroot Industry – The Way Forward (Randolph Cato/Board Paper)	Some refurbishments of the factory Continued decline in production
		Negotiation to purchase 30 acres of Diamond Dairy estate	Discontinued due to [the cost of] transportation [to get to the site] and cost of labour ⁸
		Factory refurbishment	Increasing percentages of Grade 1 starch (65% in 1986, 90% in 1987) ⁹
		Hire debt collectors ¹⁰	Minimal debt collected
1987-1992	Declining Starch and Rhizome Production Increasing starch prices Inability to meet demand Growing debt	1988 AIA Cost cutting/financial restructuring proposals by the Manager/ AIA Mar 1987 Assessing the Potential for Expanding St. Vincent Arrowroot Starch Exports (CIRAD/Oregon State University) May 1987 Proposal for financial Restructuring (Internal/Accountant) Dec 1987 Status of the St. Vincent Arrowroot Industry (OAS/GOSVG)	Continued decline in production
1993	Inability to meet demand Growing debt undercapitalized AIA Declining production of rhizome & starch	Refurbishing Drying Facility at Owia May 1993 Proposals for the Restructuring of the Arrowroot Industry (Ministry of Finance/GOSVG)	Increase in production did not meet demand. Report and KAIRI Strategic Action Plan completed
1993 – 1999	High cost of production	Chairmanship of the AIA by area MP	Part of Outstanding loans

⁷ Minutes of 14th May 1987

⁸ Minutes of March 2nd 1989

⁹ May have been a result of re-washing of the stockpile of starch

¹⁰ Minutes of board Meeting - March 14th 1986

1999 - 2001		Government adoption of the KAIRI Strategic Action Plan the expansion of the arrowroot industry in St. Vincent, prepared by KAIRI Consultancy firm	repaid AIIP Financed
2001		Sale of Kingstown Property	
2002-2005	Growing debt undercapitalized AIA Declining Production Starch and Rhizome Production High cost of production Growing debt	AIIP implemented. Refurbishment of the Owia starch processing factory Expanding production Testing mechanical harvesters and some agronomic techniques Market research Addition of Cassava Processing and Tractor Service enterprises to AIA	Increase in area cultivated, but reduced rhizome supply Increased cost of operating factory Expanded capacity of Owia factory Sub-optimal performance of harvesters Double starch price received Increased Operating costs from new cassava and Tractor enterprises.
2005-2008	Growing debt undercapitalized AIA Declining Production Starch and Rhizome Production High cost of production Extreme difficulty in accessing labour for harvesting Significant acreages not harvested.	40% increase in price (25 cent/lb to \$35 cent/lb) Joint partnership with Cuba to develop harvester	Declining production, harvesting and processing of arrowroot Growing debt

Source: AIA Minutes, and (Cato, 1984; KAIRI, 2000; OAS, 1987)

Many of the recommendations of the studies mentioned above relating to governance and monitoring, marketing, starch processing, field production, research and development and financial management were never implemented. See Appendix 1 for a summary of these. Not unexpectedly, these findings were also made repeated by the KAIRI consultants (KAIRI, 2001). In 2002, the Arrowroot Industry Improvement Project (AIIP) was established to implement the recommendations of the KAIRI Strategic Action Plan (KAIRI-SAP) for the revitalisation of the arrowroot industry. The AIIP is further discussed further under strategies in 5.8.1.3 in the result section below. The significant contextual factors are summarised in

Table 10 below.

Table 10: Significant Contextual Variables over the Case Review Period

Key Context Variables	Major Trends in The Economy Over Five-Year Periods under Review			
	1988-1992 (First 5 years)	1993-1997	1998-2002	2003-2007
Growth Sectors in the National Economy	Significant contribution from the manufacturing, construction, transport, and government services	Significant growth in the construction, transport, retail and wholesale trade and government services	Significant growth in the construction, transport, retail and wholesale trade and government services	Significant growth in the construction, banking and insurance, transport, retail and wholesale trade and government services
Agricultural Projects		Land Redistribution	Introduction of the national Irrigation Scheme	Arrowroot Industry Improvement Project
Banana Production	99.67 MT produced	↓ Moderate decline in ↓ Banana Production	↓ Slight decline in ↓ banana Production	↓ Slight decline in ↓ banana Production
Arrowroot Acreage	Low 108 ac acres produced	↑ Significant Increase ↑ acreage produced ↑	↓ Moderate Decline ↓ in acreage ↓ produced	Small Increase in acreage ↑ produced
Rhizome Production	850 tons of rhizome harvested	↑ Moderate Increase ↑ rhizome harvested	↑ Significant ↑ Increase rhizome ↑ harvested	Moderate Decline in ↓ rhizome ↓ harvested
Starch Production	330 tons of Starch produced and Sold	↓ Moderate Increase ↓ in Starch ↓ Production	↑ Slight increase in ↑ Starch Production	↓ Significant ↓ Decline in Starch ↓ Production

3.6 St. Vincent Arrowroot Starch

Arrowroot starch is extracted from arrowroot rhizome using a wet milling technique. The starch, when dry is both tasteless and odourless, with moisture content about 12-15%. The starch granule sizes range from 30-50 microns, and are ovoid or ellipsoid in shape.

In the 1980s, up to 75% of the starch was used for used for industrial purposes (Coopers and Lybrand, 1982). This included the use in producing carbonless paper, smudge control in printing. The second main use was as a food ingredient (30% in the 1980s). These uses included glazing and making clear translucent sauces, as a

thickening agent at lower temperatures, to prevent the coarse curdling of milk, for making easily digested baby foods, including biscuits. As technology improved, manufacturers were able to use fractionation to extract cheaper alternatives to arrowroot. As such, wheat, corn, tapioca, sago and potato starches became significant substitutes for starch. Most industrial users and food manufacturers switched to the cheaper alternatives. Today, the greater majority of starch is used as a food ingredient. The starch by-products are noted for their use in soothing the skin, for use in cosmetics and powder and pharmaceutical, though there is little evidence of this at present.

St. Vincent arrowroot starch is recognised for its quality, and as such it achieves premium prices over its competitors such as Thailand and Brazil (Coopers and Lybrand, 1982) highest priced starch

3.7 Production to Market - A Synopsis

The arrowroot crop cycle spans 11 to 12 months between November and April. Harvesting and planting activities occur simultaneously, since the planting material for the new crop comes from the harvested rhizome, which, if not planted within days of harvesting, quickly loses viability. Farmers may access the AIA's credit facility to assist with the cultivation of the crop, or to receive an income-advance in lieu of a deduction from projected revenues. Credit access depends on the approval from the Extension Officer, based on the applicant's production status and credit history, and on the financial ability of the AIA.

To optimise rhizome-starch yield, the AIA coordinates harvesting activities to avoid delays in processing, which diminishes starch content. This system involves the Extension Officer authorising the farmer to harvest by issuing a Reaping card. The Officer then conveys this information to the processing factory and the AIA office. The harvested rhizomes are transported to the factory and processed, using a wet milling technique and dried using a natural-air or forced heated air-drying technique. This is then pulverised, bagged and subsequently exported. Though the AIA once sold retail packaged starch, it currently sells virtually its entire stock as bulk starch.

At payment, the AIA should pay farmer for rhizome delivered, less any outstanding credit. However, if this is likely to result in no cash payment to the farmer,

the AIA may defer part of the debt in whole or in part. The AIA may also make payments to farmers for rhizomes not harvested, if the reasons for such are beyond the farmer's control. Arrowroot fields, which were not harvested, can be subsequently cared and harvested in the next harvest season. Cash remaining with the AIA after rhizome and overhead debts payment are allocated to payment of expenses until the next harvest cycle when there is another income stream. However, this revenue stream often falls short of the operational requirements. In such cases, the AIA pursues a financing strategy, which includes advance payment for starch, accessing government grants, and the use of an overdraft facility— usually \$400,000 annually¹¹.

¹¹ Corroborated by the Board Minutes and Correspondence and Audited Financial Statements..

4 Methodology

“Law is order, and good law is good order”. Aristotle,

4.1 Introduction

This chapter outlines the research paradigm, research design and methods used to completed the case study. The following are the main topics presented in this chapter. (i) the research paradigms and perspectives, (ii) research method and design, including the theoretical framework, (iv) data measures, (v) methods for enhancing validity (construct, internal and external) and reliability applications, (vi) data collection and analysis procedures and (vii) the ethical considerations taken in this research.

4.2 Research Paradigms and Perspectives

The research study was conducted within the interpretative research paradigm (Bowen & Wiersema, 1999; Guo & Sheffield, 2006; Stablein & Nord, 1985) using an outsider mode of enquiry. The knowledge gained is subjective and contextual, given that (i) the study was premised on the researchers views and construct (Stablein & Nord, 1985), and (ii) that sense making was the outcome of the interaction of both researcher and inside actors familiar with the phenomenon of interest in the organisation. Furthermore, given the multiple realities that may have existed, multiple methods and perspectives were applied for richer understanding of the phenomenon (Astley & Vandeven, 1983; Dalton et al., 1998; Kang & Zardkoohi, 2005; Nicholson & Kiel, 2007; Smircich & Stubbart, 1985). The epistemological assumptions of the paradigm were used to guide this research in line with the guidance of Carter and Little (2007).

The researcher brings his knowledge of the literature to the study, using multiple theoretical lenses, including property rights, transaction cost, agency, stakeholder, stewardship, resource base, and resource dependence theories.

4.3 Research method

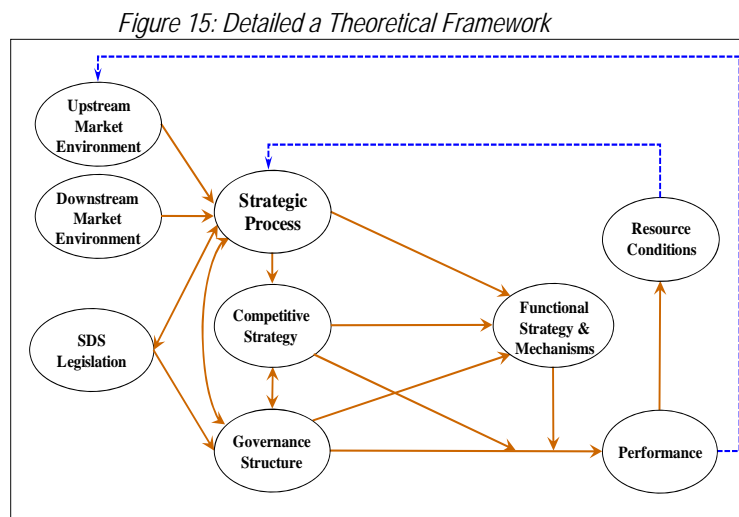
A review of the empirical and theoretical literature showed that the overwhelming number of studies used the quantitative multivariate analysis

methodology to study the governance-performance relationship (Escriba-Esteve, Sanchez-Peinado, & Sanchez-Peinado, 2008; Ibrahim et al., 2003; Robson & Freel, 2008). However, multiple case studies, Meta analysis and archival analysis were also used, but less frequently. Single cases studies were rarely used.

Despite its rarity in the literature field, a holistic (single) explanatory case study design was chosen based on the advantages over other methods. According to R. K. Yin (2003), the advantages of a case study include the ability to study a unique phenomenon of interest over time rather than a snapshot evaluation, and the ability to answer how and why questions. It also facilitates the contextualising of an extreme, polar-type phenomenon (the AIA being consistently low performer), thus allowing for the development of rich case study (Pettigrew, 1990).

4.3.1 Research Design

Figure 15 below illustrates a theoretical framework which captures the relationships between the key constructs discussed above. Note that the context variables include the market and other socio economic and political elements.



4.3.1.1 Data Measures

To operationalise the model, the key indicator measures and their sources, which were selected, based on the theoretical model, (see Appendix 5). Given that some variables such as opportunism, utility function and limitability, were unobservable, the recommendation of Godfrey and Hill (1995) to use corroborated observable measures

was adopted. Measures were therefore selected based on their use in the empirical literature. Where possible multiple measures were selected to measure a construct. This approach was used to build in information redundancy and help to build rigour into the conclusions. The expected patterns of for each measure (Appendix 6) was developed to aid pattern matching in the analysis of the results (Nicholson & Kiel, 2007; R. K. Yin, 2003).

4.3.2 Validity & Reliability

A major threat to the acceptance of the findings of any research is that of bias at the design, data collection (from interviewer or interviewee bias) and at the analysis stage (Carter & Little, 2007; R. K. Yin, 2003). To increase validity (construct, internal and external), reliability tactics recommended by R. K. Yin (2003) were adopted (see Table 11). These are discussed in the following sections.

Table 11: Tactics for Improving Case Study Validity and Reliability

Strategy	Case Study Tactic	Phase of research in which tactic occurs
Construct validity	Use multiple sources of evidence Establish chain of evidence Have key informants review case report	Data collection Data collection
Internal validity	Do pattern matching Do explanation building Address rival explanation Use logic models	Data analysis Data analysis Data analysis Data analysis
External validity	Use theory in single case-studies Use replication logic in multiple-case studies	Research design Research design
Reliability	Use case study protocol Develop case study database	Data collection Data collection

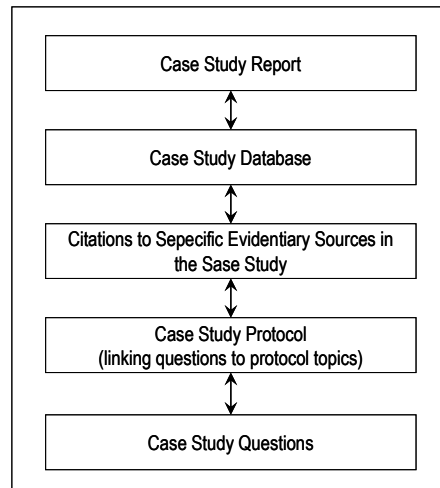
Source: (R. K. Yin, 2003, p. 34)

4.3.3 Construct validity

A research chain of evidence, multiple sources of data and a review of the summary findings by some informants were used to ensure acceptable construct validity and data representation. The case study chain of evidence (Figure 16) was established to ensure that the relevant case data was secured. This facilitated a coherent and progressive movement from the case questions to the final case report. During the data collection phase, multiple respondents were interviewed to ensure that the competing perspectives of the different actors were captured (R. K. Yin, 2003). Another strategy

was the presentation of the draft findings made during data collection to key informants and receiving their feedback regarding the accuracy of the same (Voss, Tsikriktsis, & Frohlich, 2002).

Figure 16: Case Study Chain of evidence



Source: (R. K. Yin, 2003, p. 106)

4.3.3.1 Internal validity

Rival or conflicting explanations were examined critically to eliminate spurious conclusions and improve internal validity, (Eisenhardt, 1989b). Additionally, pattern matching logic and explanation building were used to match predictions with actual case findings (Nicholson & Kiel, 2007).

Interviews were carried out to the point where there was theoretical and data saturation, that is, until no new significant information was forthcoming (Eisenhardt, 1989b; Guest, Bunce, & Johnson, 2006; Onwuegbuzie & Collins, 2007).

Secondary data (qualitative and quantitative) were used to triangulate interview data. This strategy was used to minimise bias caused by history and maturation effect, non-recall or where there were knowledge gaps in cases where informant was not involved in decision making for all of the last 20 years.

4.3.3.2 External validity

External validity in single case studies is improved when it is grounded in theory. Hence, the findings of this study will be grounded in governance theory, thereby facilitating analytic generalisations (Onwuegbuzie & Collins, 2007; R. K. Yin, 2003).

4.3.3.3 Reliability

A case study protocol was developed and used to guide the research process at the field stage (see appendix 8). The main elements of the case study protocol were the research objectives, relevant readings, research questions, field procedures, schedule of activities, and the case study questions (see Appendix 9). Additionally, and as part of the case study protocol, case-study database was established to secure all relevant evidence used to analyse and the phenomenon. Almost all records were digitised for easy retrieval and reference on the computer (see Table 12 for categories). These steps created a trail of evidence, which will allow any independent researcher to follow the process and the evidence and come to a similar conclusion. .

Table 12: Informants Interviewed and their Roles in the AIA over the Last 20 years

Folder Name	Electronic File Type	Contents
Financial Information	PDF Files	Various annual financial statements of the AIA and other relevant financial document
KAIRI Documents		KAIRI consultancy report on the AIA restructuring
Other (AIA) Documents		Other relevant AIA and non-AIA documents
Other Reports		Other relevant AIA and non-AIA Reports
Kingstown Property Information		Documentation and correspondence relating to the Sale of the AIA's Kingstown property
AIA AGM Minutes		AIA AGM Minutes (only 2)
AIIP		Documents relating to the AIIP
Arrowroot Act		AIA legislation 1976
Academic Articles		Articles used in this thesis report
Board Minutes		AIA Board minutes 1985-2008
AIA Correspondence		Relevant AIA correspondence
Budget Addresses		St. Vincent and the Grenadines annual parliamentary budget addresses (sections on agriculture)
Voice Recording		Audio Files
Transcripts	PDF & MS Word Files	Transcripts of Interviews
Excel Database	Excel File	Compiled database including longitudinal records of financial and other performance indicator, using various sources
PowerPoint	PowerPoint File	Illustrations of models and graphics used for thesis report

4.3.4 Data Collection and Analysis

Given the temporal and context rich nature of the study, both qualitative and quantitative data were required to populate the indicator variables. The relative advantages and disadvantages of each (see Table 13) were considered and the interview, documentation and archival records were selected as the best means for capturing the data.

Table 13: Relative Advantages of Different Sources of Evidence

Source of Evidence	Strengths	Weaknesses
Documentation	<ul style="list-style-type: none"> – Stable – can be reviewed repeatedly – Unobtrusive – not created as result of the case study – Exact – contains exact names, references, and details of an event – Broad coverage – long span of time, many events, and many settings 	<ul style="list-style-type: none"> – Retrieval – can be low – Biased selectivity, if collection is incomplete – Reporting bias – reflects (unknown) bias of author – Access – may be deliberately blocked
Archival records	<ul style="list-style-type: none"> – Same as above for documentation – Precise and quantitative 	<ul style="list-style-type: none"> – Same as above for documentation – Accessibility due to privacy reasons
Interviews	<ul style="list-style-type: none"> – Targeted – focuses directly on case study topic – Insightful – provides perceived causal inferences 	<ul style="list-style-type: none"> – Bias due to poorly constructed questions – Response bias – Inaccuracies due to poor recall – Reflexivity – interviewee gives what interviewer wants to hear
Direct observation	<ul style="list-style-type: none"> – Reality – covers events in real time – Contextual – covers context of event 	<ul style="list-style-type: none"> – Time consuming – Selectivity – unless broad coverage – Reflexivity – event may proceed differently because it is being observed – Cost – hours needed by human observers
Participant observation	<ul style="list-style-type: none"> – Same as above for direct observations – Insightful into personal behaviours motives 	<ul style="list-style-type: none"> – Same as above for direct observations – Bias due to investigator's manipulation of events
Physical artefacts	<ul style="list-style-type: none"> – Insightful into cultural features – Insightful into technical operations 	<ul style="list-style-type: none"> – Selectivity – Availability

(R. K. Yin, 2003, p. 86)

Qualitative data were generated from interviews with representatives of key stakeholder categories in the AIA. To achieve this, a semi-structured questionnaire instrument was developed based on the case study questions. This instrument was used as a guide in the interview process and ensured that data was collected on each relevant theme. However, in many instances, some questions were re-asked or others included where there were new leads. Prior to actual interviews, informants were identified based on their roles in the AIA in the recent past. Their support and permission for

interview was gained through formal letters and telephone requests and in accordance with the Massey University code of ethics.

The actual interviews differ from the planned schedule for several reasons. Firstly, because of communications difficulties some informants did not receive their correspondence on time, despite letters and verbal reminders. This led to rescheduling and significant time loss. Secondly, some categories were excluded and other included. For example, due to delays as described above, the Board was interviewed as a collective, rather than by representative categories. To add validity, and variability to the data, a former Minister of Government and chairpersons were included. The local and regional marketers were excluded due to the insignificant volumes of the product traded with them. In addition, the extra-regional buyers were difficult to access.

Eighteen (18) interviews were conducted with key current and past industry actors, including farmers and Government officials, agents and the current buyer of AIA starch (see Table 14). Regardless of prior written requests, all participants were briefed verbally regarding their rights as per the case study information sheet (see appendix 7) and their consent (see appendix 10) gained to record the interview electronically. The signed consent forms are included in the database. All interviews were recorded with an Olympus© DS-30 electronic voice recorder and kept secured on my computer which was password protected.

To guard against bias during the interview, participants were continually reminded of the purpose of the research and reassured to build trust in the interview process. Bearing in mind Alvesson's (2003), eight metaphors, an active ear was kept for any signs of bias. Whenever this was observed, interviewees were prompted for further explanation. In addition, where there were conflicting or doubtful answers provided, non-confrontational clarification was sought

Considerable amounts of secondary data (both quantitative and qualitative) were garnered from the AIA's records, the National Archives, the Ministry of Agriculture and from individual informants. However, despite repeated and consistent attempts, some data could not be accessed. Absent records included those of the AIIP implementation, some Annual Financial Statements, Minutes of General Meetings, some recent Board

minutes, Annual reports, correspondence and receipts. The AIIP officials indicated to this researcher that the absent records were due to a computer hard-drive failure and misplacement during the periods of transfer from Kingstown to Orange Hill and during the AIIP project.

Table 14: Informants Interviewed and their Roles in the AIA over the Last 20 years

Names	Position(s) held in the AIA	Role(s) played in the SVAIA					
		Agent	Principals		Board		Buyer
			Farmers	Government Official	Government	Farmers	
Michael James	Director				√	√	
Allison Balcombe	Former Chairman & Farmer		√			√	
Philmore Isaacs	Former CAO			√	√		
Markley Gill	Former General Manager (2004-2008)	√					
Cauldric Browne	General Manager	√					
Honourable Montgomery Daniel	Minister of Agriculture, farmer			√			
Alan Alexander	Permanent Secretary			√			
Leslie Nero, Lydia Mattis, Crispin Daniel, Winifred Ballantyne	Staff (group 5 present)	√					
Gregory Gumbs	Former Auditor						
Hon. Monty Roberts	Former Chairman, MP & Minister of Agric, Farmer			√			
Reuben Robertson (2)	CAO (Ag) & ex-officio Director			√			
Glenroy Browne	Former AIIP & General Manager (Ag)	√					
Peter Ballantyne (Chair), St. Elbert Walters (Deputy Chair), Oswine Ballantyne, Calma Mc. Donald	Directors (Group - 4 present)				√	√	
Same as above plus Esford Lavia	Board members				√	√	
Walter Hackshaw, Clifford Nero, Euran Williams, Maude Nero, Estina Francis, Norris Baptise, Alhius Baptiste	Farmers (Owia Group)		√				
Cynthia Baptiste, Lucinda Roberts, Urias Caesar, Caulton Huggins, Estina Lavia, S. Daniel	Farmers (Sandy Bay)		√				
Frontier Starch Co.	Current buyer of over 95% of AIA starch						√

Pricing and demand information in the export market was extremely limited. The AIA did not have this information, and the current buyer refused to provide this after expressing privacy concerns. Where possible, the internet was used to gain insights regarding pricing. This absence of data limited the ability to triangulate some interview data, but also compromised the quality of some information.

Back at the desk, each interview was transcribed into a Microsoft Word © document. This prepared the data for analysis, but also allowed me to review and internalise the data as presented by participants. These documents were then screened using Alvesson's (2003) eight metaphors for reflexive interview analysis to remove instances of interview bias which were due mainly to interviewee and in some cases inadvertent interviewer bias. Two forms of bias – 'impression management' and 'political actions' - were prominent as interviewees attempted to absolve themselves from or apportion blame to others for the poor performance of the AIA. Another source of bias was inadvertent and related to my perceived status as a Masters student and as a Ministry of Agriculture official. Interviewees were therefore noted to be engaging in tuning of the research questions and topics, using the interview as local accomplishment and at times using language to craft accounts.

These transcripts were then summarised into succinct paragraphs, excluding the identified biases, but taking care to leave the substance of the interview intact. Following Miles and Huberman (1994), story lines were developed by searching for cause and effects within each interview (see appendix 11). These files were then saved as Adobe© PDF files. The Adobe© search function were then used to search all files simultaneously for words which matched the themes and indicator measures in the theoretical framework. The findings were summarised into paragraphs and then made into coherent scripts under those thematic headings (see appendix 12). Important events and issues raised by interviewees were treated in a similar way.

To increase validity during this analysis and write up stages, a reflexive approach was continued in order to revise the data from different perspectives (Mauthner & Doucet, 2003). In addition, rival accounts were constantly challenged to increase analytical rigour though nuanced conclusions. Pattern matching logic (Nicholson & Kiel, 2007; R. K. Yin, 2003) was used to compare the results with expected patterns developed from normative theory and empirical findings, while explanation building was used to develop causality.

4.4 Ethical Considerations

This research was conducted in accordance with Massey University's Code of ethical conduct for research, teaching and evaluations involving human participants. Preliminary screening identified it as a low risk study.

Consequently, as required, all participants were provided with the critical details of the study via the information sheet and their consent sought before any interviews were done. Letters requesting permission of the AIA and informants were completed and sent ahead of fieldwork. Follow up of these requests was conducted via telephone calls to participants. All evidence of fieldwork including the databases and evidence of consultation were kept to facilitate independent verification.

The Ministry of Agriculture (MOA) has legislative oversight for the AIA, and so, although I was not an employee of the AIA, nor assigned to it, the fact that I was associated with the MOA created potential a conflict of interests. Firstly, the study may have been perceived as constituting work of the MOA, rather than a requirement for completing my degree. This could have resulted in situational interview biases particularly with respect to interviews with the top level managers. Secondly, though not anticipating any personal influence, it was evident that some interviewees (farmers and AIA personnel) perceived my role more as a consultant than as that of a research student. Thirdly, the findings may not sit well with key decision makers of this Ministry. However, these potential conflicts were not perceived to create a significant ethical dilemma to warrant a change in the level of rigour as prescribed by the human ethics process. Caution was taken to minimise these potential conflicts; during interviews, continuous efforts were directed at stating the objectives and purpose of the study as per the information sheet, and by offering clarification at every opportunity during fieldwork. To counter any possibility of this, the findings were drafted to provide a holistic picture even while facilitating rival perspectives.

5 Results

“It is dangerous to be right when the government is wrong” Voltaire

5.1 Introduction

The case-data is presented in this section. The results are presented in the context of the *a priori* theoretical framework. For pragmatism, the performance outcome (dependent variable) was presented in the first sub-section. This facilitated upfront knowledge of the issues which were at the heart of the AIA’s performance woes, thereby aiding a clearer understanding of the relationship between the independent and other mediating variables at the heart of this study. The results in this section focussed on the AIA’s performance over the production, supply, cost control and profitability. These results were based primarily on the secondary quantitative data gleaned from the AIA records and other relevant reports.

In some cases, the required data were not forthcoming, despite exhaustive efforts during the data collection and analysis stages. In some cases, performance measures were dropped where data was absent. One such example was the market-share performance measure. In other cases, this shortcoming was remedied by the used of proxies to aid comparison and analysis. For example, in the absence of audited financial statements, statistics in the draft financial reports in 2005 and 2006 were used. A second example was the use of a proxy to account for the absence of data relating to the production cost at the pulverisation to marketing stages. This was achieved by allocating a percentage of the ‘selling and administration’ as production costs. Although some specific data points may be challenged, the overall analysis and conclusion was not compromised. I am of the firm opinion that the quality of data used was acceptable and did not distort the analysis conclusions of this study. However, for the benefit of independent comparison, I have laid out the assumptions where proxies were used or where there were missing data.

The subsequent sub-sections in this chapter were based mainly on the qualitative data from interviews, although secondary data were used to triangulate and to facilitate the exploration of rival arguments. These results provide knowledge relating to ‘how’ and ‘why’ the AIA’s governance structure influenced its performance. These data are

presented in the following sections; AIA's external environment - including the supply and demand factors, labour dynamics, legislation, government policies and competition from other crop enterprises, the AIA's bureaucratic strategic process, the choice of competitive strategy and governance structure, strategic moves (firms strategies), and resource characteristics. The final sub-section presents the results relating to the performance-related feedback effects on the AIA's resource base, and resource dependency and upstream production.

5.2 AIA Performance (Dependent variable)

The AIA's performance – as measured by the production and supply of starch (economies of scale and scope), cost control, revenues and profits - was consistently weak over the past twenty (20) years. Each of these is presented below.

5.2.1 Production & Supply

The volume of raw-material processed by the AIA (rhizomes supplied), processing efficiency, and total starch output fluctuated during the study period (see Table 15 below).

Table 15: Key AIA Production Data (1988 – 2008)

Performance Indicator	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Rhizomes Processed (Tons)	757	902	618	573	1396	1138	1561	2314	3233	3122
Starch produced (Tons)	247	249	124	139	161	148	203	278	375	417
Starch Recovery Rate	33%	28%	20%	24%	12%	13%	13%	12%	12%	13%
Starch-Rhizome Ratio	1:3.0	1:3.6	1:5	1:4.2	1:8.3	1:7.7	1:7.7	1:8.3	1:8.6	1:7.5
Starch/farmer (Tons)	4.57	5.79	3.76	6.32	1.53	0.00	1.06	1.08	0.49	0.59
Starch Sold (Tons)	760	553	86	123	137	126	188	258	358	301
Processing Capacity (Tons) ¹²	5000	5000	5000	5000	5000	5000	5000	5000	5000	9000
Output/Fixed Asset (Lb/1\$ F. Asset)	1.27	N/A	N/A	0.22	0.26	0.26	0.43	0.64	0.95	0.86

Continued below

¹² Daily capacity x 20 working days x 5 months

Table 15 Continued

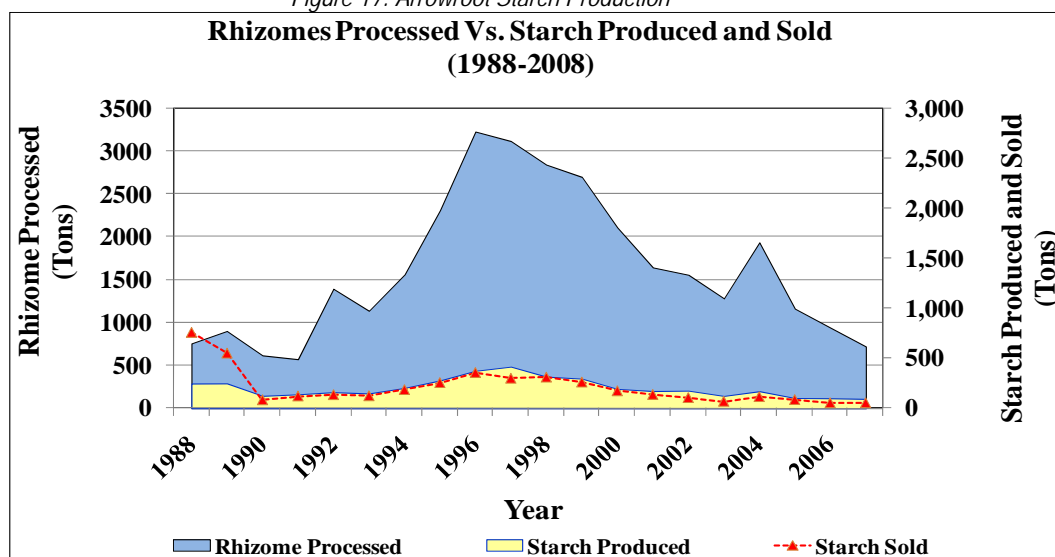
Performance Indicator	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Rhizomes Processed (Tons)	2846	2703	2112	1645	1559	1283	1938	1164	942	721
Starch produced (Tons)	316	296	194	172	176	123	170	102	100	94
Starch Recovery Rate	11%	11%	9%	10%	11%	12%	9%	9%	11%	13%
Starch-Rhizome Ratio	1:9.0	1:9.1	1:10.9	1:9.6	1:8.9	1:8.3	1:11.4	1:11.4	1:9.4	1:7.7
Starch/farmer (Tons)	0.49	1.11	1.04	0.00	1.23	0.00	0.00	0.00	0.00	0.82
Starch Sold (Tons)	312	263	176	138	107	71	117	88	56	56
Processing Capacity (Tons)	9000	9000	5000	5000	5000	5000	7000	7000	7000	7000
Output/Fixed Asset (Lb/1\$ F. Asset)	0.96	0.87	0.57	0.01	0.07	0.04	0.03	0.03	0.02	N/A

Source: Constructed from KAIRI Report and AIA records.

5.2.1.1 Rhizome Processing

The production and processing of starch fluctuated during the period under review (see Table 15 above and Figure 17 below). The AIA overcame its weak performance in the late 1980s and increased rhizome processing by approximately 330% between 1990 and 1995. However, this increased production was not sustained, as processing volumes declined by approximately 78% over the subsequent twelve (12) years.

Figure 17: Arrowroot Starch Production



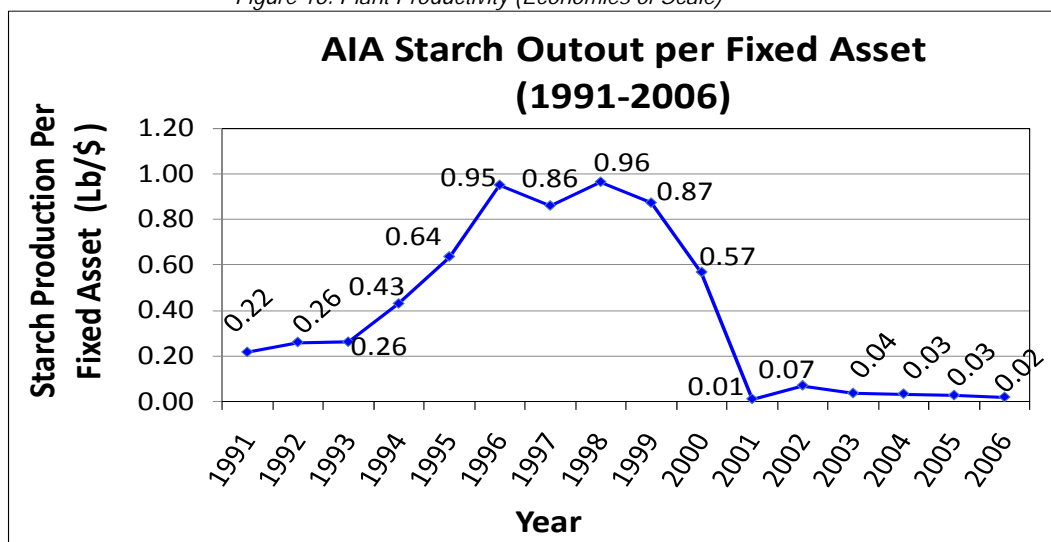
Source: Constructed using compiled data from AIA Records and the KAIRI consultancy report

The volume of starch produced was directly associated with the volumes of rhizome and processed, rather than with changes in the manufacturing capacity of the

factories. The exception to this was the high rate which was reported between 1988 and 1990. The actual rate was likely to be lower, since the re-processing of stockpiled starch gave the false impression of a higher recovery rate.

To demonstrate the effective use of fixed assets, and in the absence of better measures, the unit output per fixed assets was used as a proxy for economies of scale (see Figure 18 below). This measure is essentially the net sales per fixed asset financial ratio, without the effects of price. This efficiency was driven by volumes of starch processed. However, this performance was also influenced by the accounting practice, as the full value of AIA’s property and plant was not reflected on in its accounts prior to 2001. For example, the 1993 audited financial statement reported the value of fixed assets was reported at EC\$0.481 million, while a valuation report in that same year reported the AIA’s Kingstown property at EC\$8.307 million. It is quite realistic therefore that the output per unit of fixed asset prior to 2001 was significantly lower than calculated. This argument is supported by the lower values for 2001 when the Kingstown property was re-valued and was reflected on the balance sheet. When this asset was liquidated, productivity appeared to increase slightly, but subsequently declined as output declined and as the relocated and refurbished plants increased in value.

Figure 18: Plant Productivity (Economies of Scale)



Sources: Constructed from AIA financial reports and other AIA records

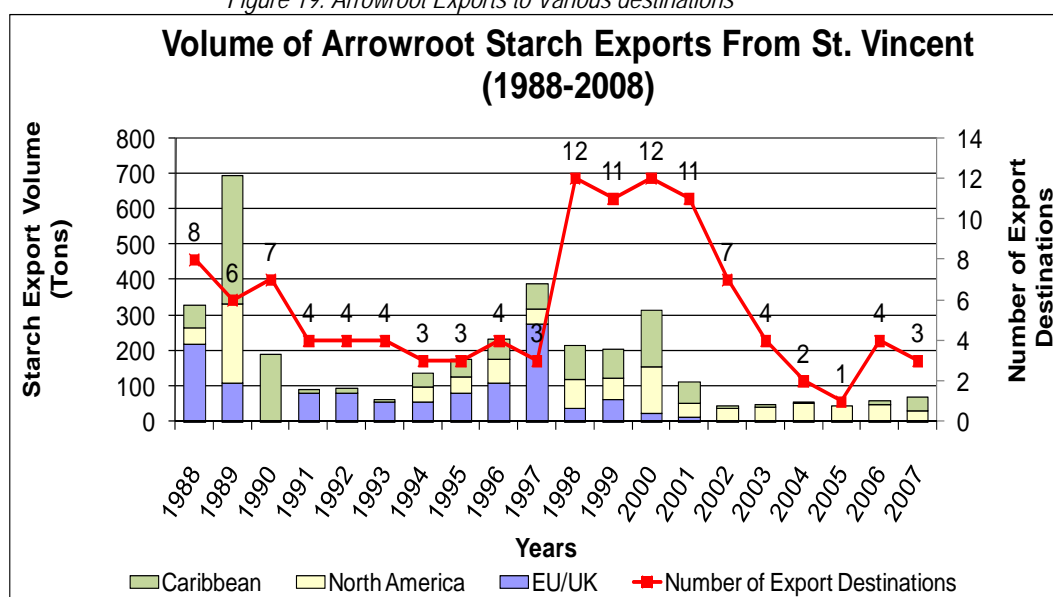
However, the trend of declining production continued from an average of 6,300 tons the 1960s. The annual averages since then were as follows; 1,700 Tons in the

1970s, 1,100 tons in the 1980s, 246 tons in the 1990s and 240 Tons between 2000 and 2007.

5.2.1.2 Starch Supply

The AIA experienced small economies of scope. This was related to the inability of the AIA to satisfactorily meet its market demands at the low levels of starch production as described above. As a result the number of markets serviced was adjusted in line with the production of starch (see Figure 19 below). However, the majority of exports were to three (3) importers UK and US markets (1988-1992 this was 64%). But the 2002-2007 periods, 78% of the exports were to the US only. The value of market share in these destinations could not be verified due to a lack of information and or documentation.

Figure 19: Arrowroot Exports to Various destinations



Source: Constructed from KAIRI consultancy report, Central Statistical Department database.

5.2.2 Financial Performance

The AIA performed poorly in all categories of financial performance throughout the study period. Furthermore, these were generally declining as the years progressed. These results are presented below along the themes of costs, revenue and profits (see Table 16 below). Financial data are reported in East Caribbean dollar (EC\$), which is fixed to the US dollar at the rate of US\$1: EC\$ 2.65.

Table 16: Key AIA Financial Data (1988 – 2008)

Performance Indicator	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Factory Expenses (EC\$M)	0.18	0.22	0.17	0.27	0.28	0.41	0.49	0.46	0.77	0.60
Selling, & Adm. Expenses (EC\$M)	0.52	0.50	0.09	0.13	0.12	0.11	0.14	0.11	0.11	0.15
C.O.P at Factory Gate(EC\$/Lb)	\$0.74	\$0.90	\$1.35	\$1.93	\$1.75	\$2.78	\$2.40	\$1.64	\$2.04	\$1.85
C.O.P -Pulverisation to Warehouse (EC\$/Lb)	\$0.69	\$0.91	\$1.00	\$1.02	\$0.87	\$0.84	\$0.73	\$0.42	\$0.32	\$0.49
Total C.O.P. (EC\$/Lb)	\$1.43	\$1.81	\$2.35	\$2.94	\$2.62	\$3.62	\$3.13	\$2.07	\$2.35	\$2.34
COP Equivalent to 1 Lb Rhizome (EC\$/Lb) ¹³	\$0.47	\$0.51	\$0.47	\$0.71	\$0.31	\$0.47	\$0.41	\$0.25	\$0.27	\$0.31
Average Selling Price (ASP) (EC\$/Lb)	\$1.53	\$1.46	\$2.45	\$3.19	\$2.51	\$2.72	\$3.15	\$2.41	\$2.73	\$3.34
(ASP) Equivalent to 1 Lb of Rhizome (EC\$/Lb) ¹⁴	\$0.50	\$0.41	\$0.49	\$0.76	\$0.30	\$0.35	\$0.41	\$0.29	\$0.32	\$0.45
Rhizome Price (EC\$/Lb)	\$0.09	\$0.12	\$0.13					\$0.00	\$0.18	\$0.21
Retained by AIA (EC\$/Lb) ¹⁵	\$0.42	\$0.29	\$0.36				\$0.41	\$0.29	\$0.14	\$0.24
Fixed asset (EC\$M)	0.6			0.6	0.5	0.5	0.4	0.4	0.4	0.4
Accumulated Deficit(EC\$M)	-6.9			-10.2	-11.2	-12.6	-14.2	-15.3	-16.6	-15.6
Total Liabilities & Deficit(EC\$M)	-5.9			-9.9	-11.2	-12.6	-14.2	-1.6	-1.5	-1.7
Factory Gross profit (loss)(EC\$M)	-0.1	0.2		0.6	0.2	0.1	0.0	0.0	-0.1	0.0
Operating Profit (Loss) (EC\$M)	-0.1			0.3	0.2	0.1	0.0	0.0	-0.2	-0.2
Net Profit (Loss)	-0.8			-1.1	-1.0	-1.4	-1.7	-1.1	-1.0	-0.2
Amounts due by growers(EC\$M)	0.4			-0.5	-0.5	-0.6	-0.7	-0.9	-0.9	-0.9
Amounts due to Government(EC\$M)				-1.8	-2.0	-2.2	-2.2	-16.3	-17.2	-18.0
ROA (%)	-16	-36	-31	-25	-133	-172	-207	-130	-126	-64

Table continued below

|

¹³ COP÷ Rhizome used to produce 1 lb of starch¹⁴ Average Selling Price ÷ Rhizome used to produce 1 lb of starch¹⁵ Starch Price Equivalent – Price paid to farmer

Table 16 continued...

Performance Indicator	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Factory Expenses (EC\$M)	0.63	0.82	0.74	0.74	0.64	0.54	0.70	0.59	0.52	0.00
Selling, & Adm. Expenses (EC\$M)	0.15	0.14	0.16	0.14	0.23	0.22	0.22	0.26	0.21	0.00
C.O.P at Factory Gate(EC\$/Lb)	\$1.98	\$3.19	\$3.84	\$4.30	\$3.62	\$4.40	\$4.12	\$5.81	\$5.18	N/A
C.O.P -Pulverisation to Warehouse (EC\$/Lb)	\$0.49	\$0.53	\$0.90	\$1.00	\$2.17	\$3.11	\$1.89	\$2.93	\$3.73	N/A
Total C.O.P.(EC\$/Lb)	\$2.46	\$3.72	\$4.75	\$5.31	\$5.78	\$7.50	\$6.01	\$8.74	\$8.91	N/A
COP Equivalent to 1 Lb Rhizome (EC\$/Lb)	\$0.27	\$0.41	\$0.44	\$0.55	\$0.65	\$0.90	\$0.53	\$0.77	\$0.94	N/A
Average Selling Price (ASP) (EC\$/Lb)	\$2.94	\$3.69	\$5.37	\$5.60	\$5.60	\$5.40	\$5.34	\$6.41	\$6.41	\$7.69
(ASP) Equivalent to 1 Lb of Rhizome (EC\$/Lb)	\$0.33	\$0.40	\$0.49	\$0.58	\$0.63	\$0.65	\$0.47	\$0.56	\$0.68	\$1.00
Rhizome Price (EC\$/Lb)	\$0.21	\$0.21	\$0.23	\$0.23	\$0.23	\$0.25	\$0.25	\$0.25	\$0.25	\$0.35
Retained by AIA(EC\$/Lb)	\$0.12	\$0.19	\$0.26	\$0.35	\$0.40	\$0.40	\$0.22	\$0.31	\$0.43	\$0.65
Fixed asset (EC\$M)	0.3	0.3	0.3	13.0	1.5	1.9	3.5	3.2	2.9	N/A
Accumulated Deficit(EC\$M)	-16.0	-16.1	-16.2	-5.7	-5.3	-6.0	-7.2	-8.7	-9.2	N/A
Total Liabilities & Deficit(EC\$M)	-1.7	-15.9	-7.1	-14.0	-8.1	-7.0	-7.1	-4.8	-4.4	N/A
Factory Gross profit (loss)(EC\$M)	-0.1	0.0	0.1	0.0	0.0	-0.2	-0.1	0.0	0.1	N/A
Operating Profit (Loss) (EC\$M)	-0.3	-0.1	-0.1	-0.2	-0.4	-0.5	-0.4	-0.6	-0.4	N/A
Net Profit (Loss)	-0.4	-0.3	-0.3	10.5	-0.2	-0.8	-1.2	-1.6	-0.7	N/A
Amounts due by growers(EC\$M)	-1.0	-1.0	-1.1	-0.6	-0.8	-0.7	-1.0	-0.8		N/A
Amounts due to Government(EC\$M)	-15.9	-15.9	-15.9	-12.5	-12.5	-12.5	-12.5	-12.5	-12.5	-12.5
ROA (%)	-88	-25	-7	75	-3	-11	-18	-32	-15	N/A

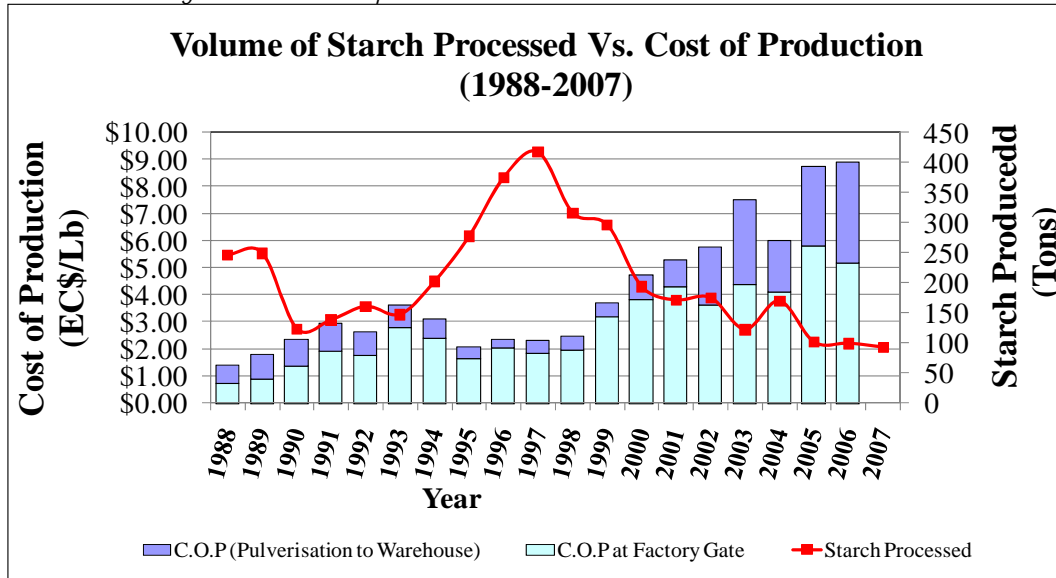
Sources: Constructed from AIA financial reports and other AIA records

5.2.2.1 Costs

The AIA incurred increasing costs of production between 1988 and 2007. The cost to produce a unit of arrowroot starch increased significantly over the study period, both at the factory level (initial processing) and at the AIA level (pulverisation, packaging and selling costs)¹⁶, although the costs in the latter were driving the overall costs at an increasing rate (see Figure 20 below). However, there was also an inverse relationship between the COP and the volume of starch produced. The interpretation of this was that cost efficiencies were significantly driven by the economies of scale.

¹⁶ For the purposes of this study, and to achieve a better measure of COP, a percentage of the Selling and Administration cost was used as a proxy for further processing and selling activities. 1988-2003 70% of S&A was allocated, while 60% was allocated in 2004 and 2005.

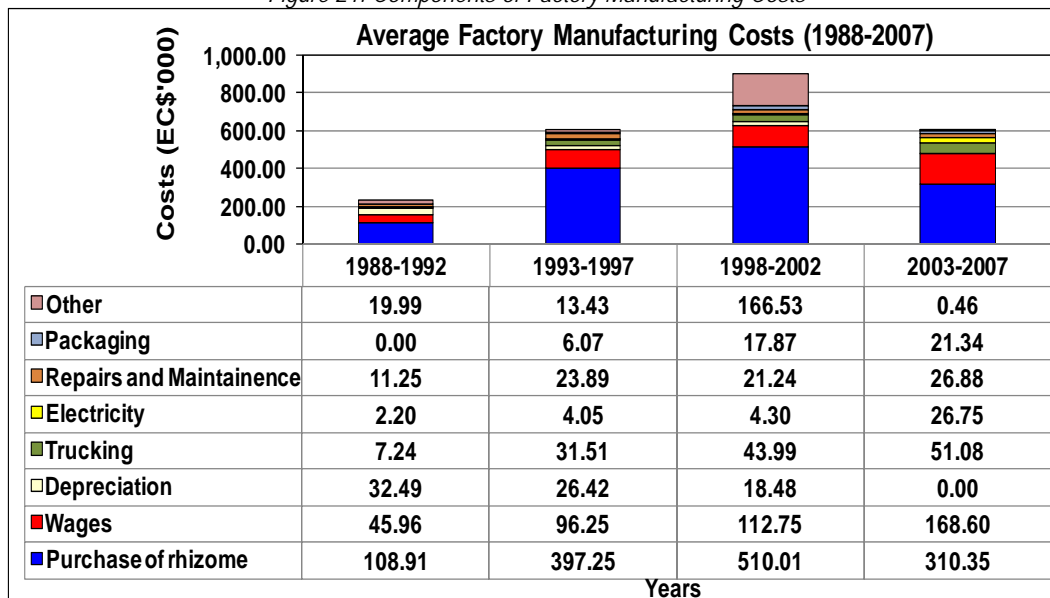
Figure 20: Relationship between Rhizome Production and Cost of Production



Sources: Constructed from AIA financial reports and other AIA records

At the factory level, costs generally fluctuated with the volumes of starch rhizome processed as seen in Figure 21 below, with rhizome purchases and labour being the most important cost drivers. However, labour costs continued to increase, regardless of volumes of rhizomes processed. Other cost in 2007 were related to several individual items related to the implementation of the AIIP

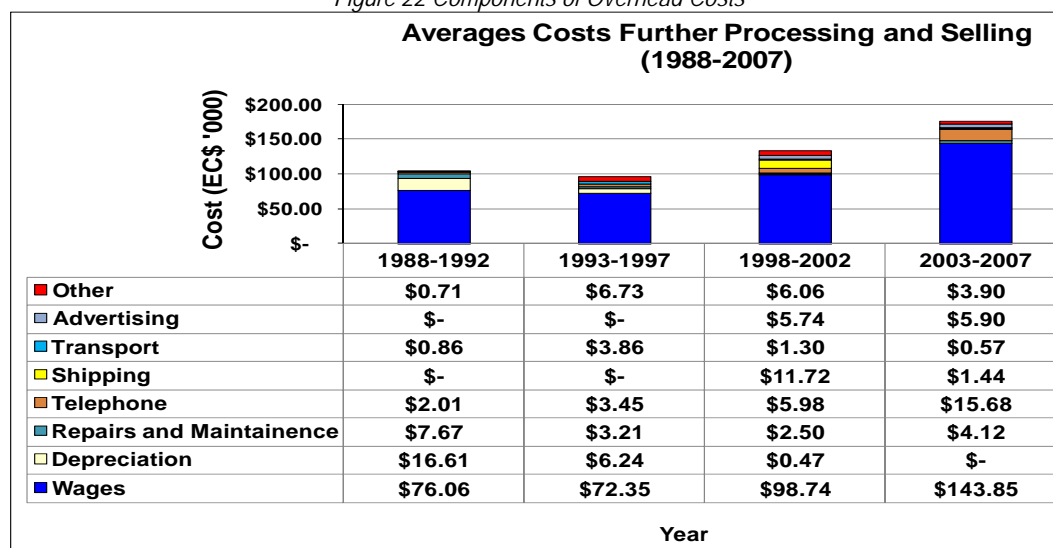
Figure 21: Components of Factory Manufacturing Costs



Sources: Constructed from AIA financial reports and other AIA records

A similar trend was at play with the additional processing and selling activities (see Figure 22 below). However, the cost relating to labour was much more significant at this level.

Figure 22 Components of Overhead Costs



Sources: Constructed from AIA financial reports and other AIA records

5.2.2.2 Agency Costs

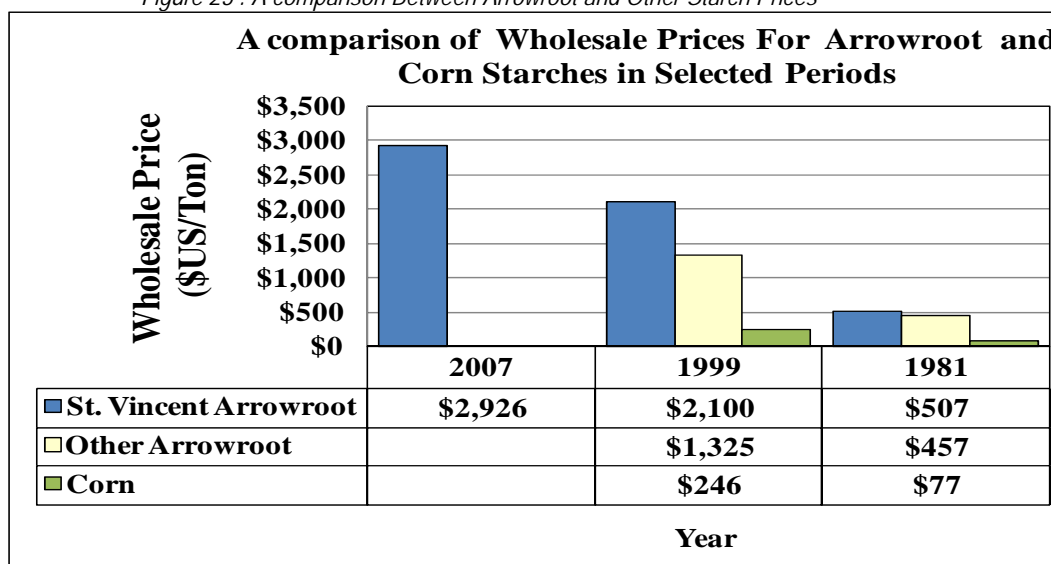
The AIA incurred significant public agency costs associated with escalating commitments, hold-ups, and risk-shifting

Public agency costs were associated with the escalating commitments of the Government, Board and management, who conspired to continue using an overdraft facility finance the operations of the AIA, despite the erosion of the AIA's asset base and financial viability. Therefore, portions of the AIA's debt (up to EC\$16.6 M at times) must be allocated to agency cost. Another set of agency costs were those which emerged out of conflicts between Government 100% block-holder and members of the AIA. These were mainly related to the hold-up associated with the decisions to keep the price of rhizomes low. Another cost in this category was the 'lost' earnings on the sale of the AIA's property. This was the difference between the actual sale-price and either the asking price of the Board, (EC\$4M) or requested by or the valued price (EC\$1M). The third category of agency costs was the decision to under-invest in the restructuring of the AIA. This was associated with the invested monies of the AIIP.

5.2.3 Starch Price, Revenue

Arrowroot starch is highly prized in the consumer markets. Therefore it attracts better prices than substitute starch commodities such as corn or wheat starch. Among this category, St. Vincent arrowroot starch commands premium prices based on its functional qualities (see Figure 23 below).

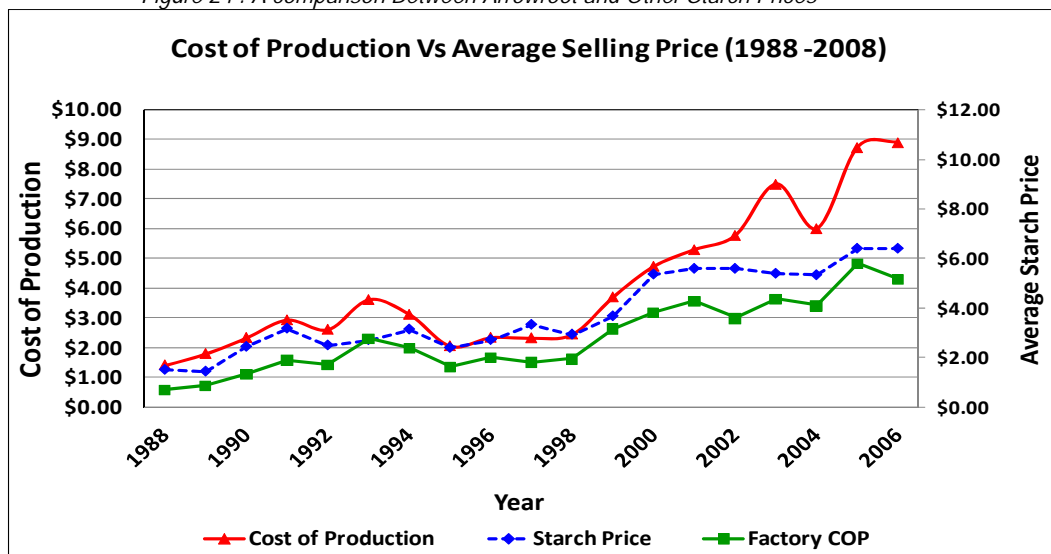
Figure 23 : A comparison Between Arrowroot and Other Starch Prices



Sources: Coopers and Lybrand and KAIRI reports and AIA data

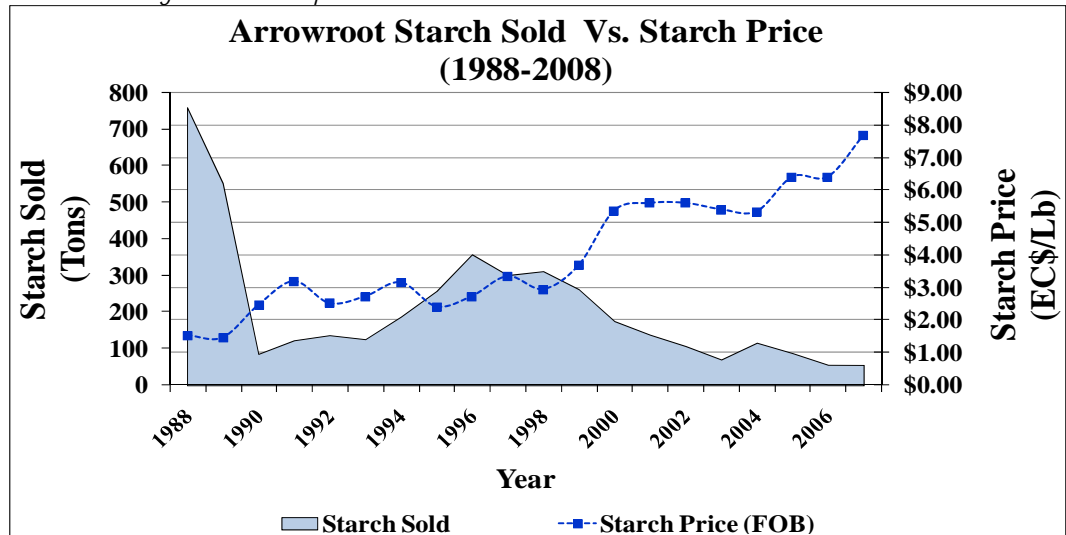
The average selling price increased at rates similar to the increases in the cost of production (Table 18), but was inversely related to the total volume of starch supplied (Figure 25).

Figure 24 : A comparison Between Arrowroot and Other Starch Prices



Sources: Constructed from AIA financial reports and other AIA records

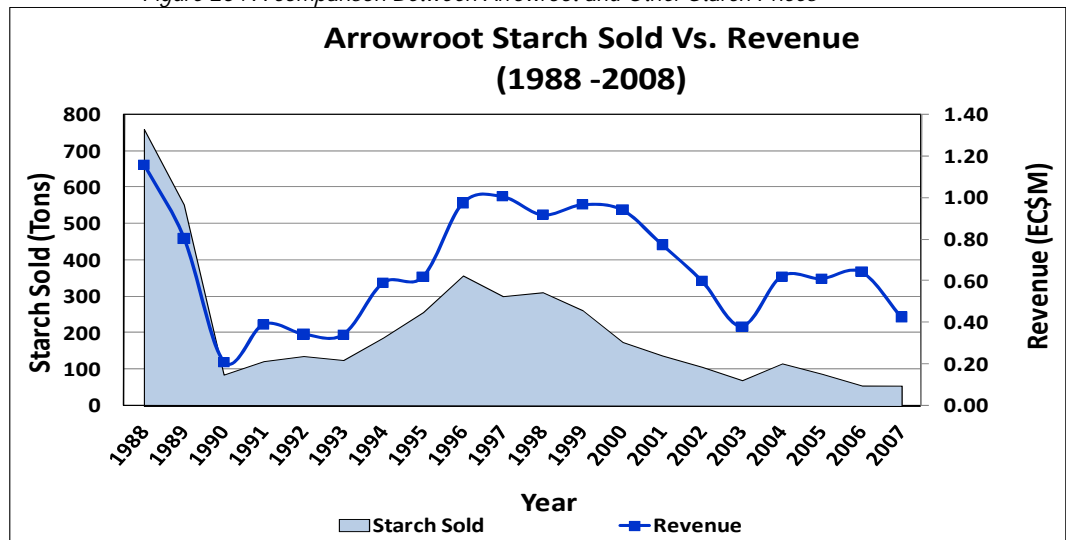
Figure 25 : A comparison Between Arrowroot and Other Starch Prices



Sources: Calculated from AIA records

The revenue earned by the AIA fluctuated in a similar way to the volumes of starch sold (Figure 26). This suggests that the economies of scope impacted more significantly on revenues, despite the significant increases in the price gains.

Figure 26 : A comparison Between Arrowroot and Other Starch Prices

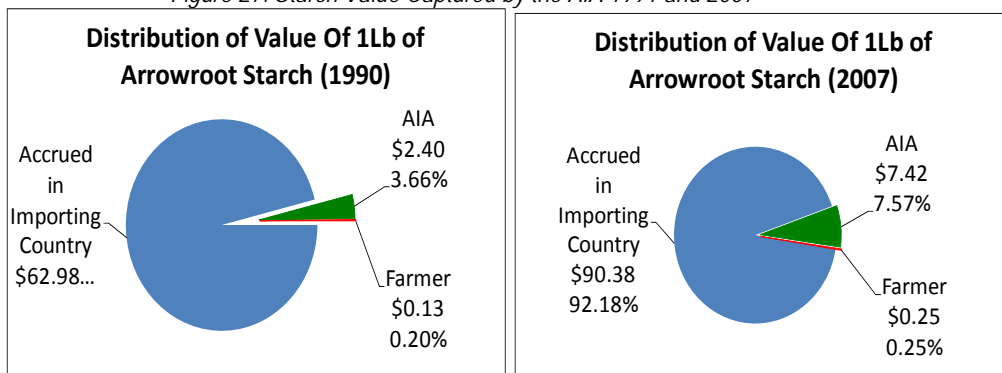


Sources: Constructed from AIA financial reports and other AIA records

The redistribution of the value of the arrowroot starch shows that the AIA was capturing a small fraction of the potential value. An online search for arrowroot starch originating from St. Vincent returned three items. These were being sold at equivalent prices of EC\$63.36/lb (US\$23/lb at <http://www.frontiercoop.com/>), EC\$98.05/Lb (US\$6.29/2.72 Oz http://www.frontiercoop.com) and \$EC126.78.77/Lb (US\$2.99/Oz <http://www.turtleislandpa.com>). While part of this value accrues due to the value addition through packaging and distribution, it is unlikely to be a significant percentage.

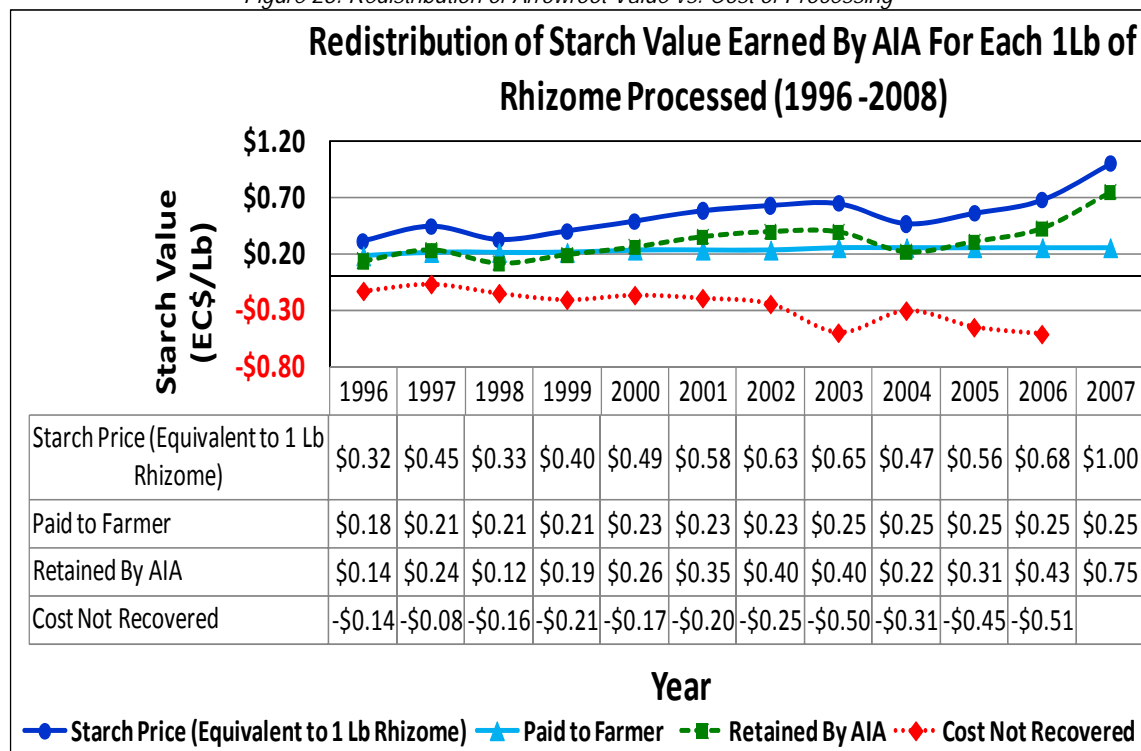
However, it demonstrates that the AIA has been receiving only a small, albeit an increasing share of the retail value, while farmers have only been able to receive only 0.25% of retail value. Figure 27 illustrates this case, using a 2 Oz retail bottle of starch as an example.

Figure 27: Starch Value Captured by the AIA 1991 and 2007



Source: Retail price based on a 2 oz bottles retail bottles from McCormick (1990) and Frontier Natural Food Product Cooperative (2007)

Figure 28: Redistribution of Arrowroot Value vs. Cost of Processing¹⁷



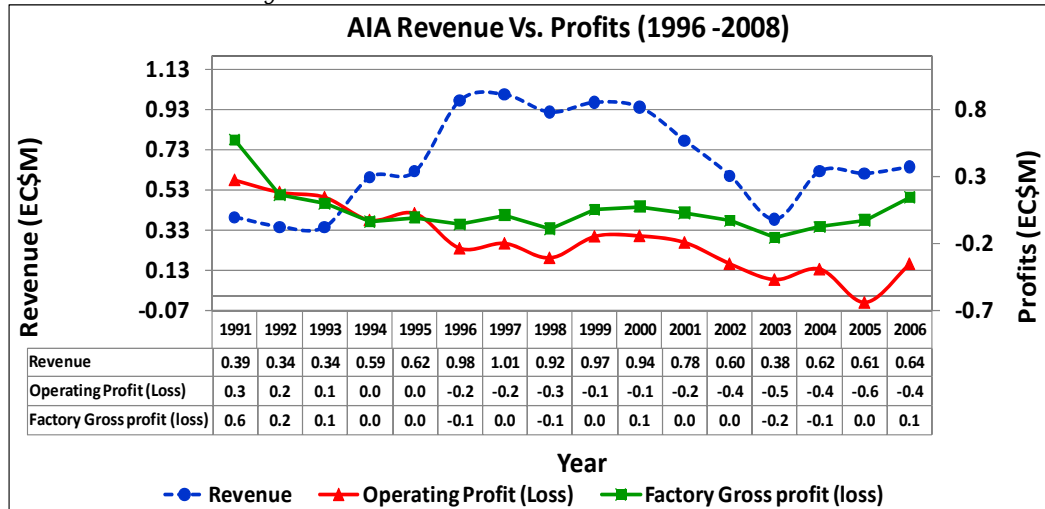
Sources: Constructed from AIA Data, MOA's Costs of Production, KAIRI Report

¹⁷ To facilitate comparison, of value distribution per unit of rhizome, the Starch Price is divided by the quantity of rhizome required to produce 1 Lb of starch in that year. .

5.2.3.1 Profitability

The AIA’s profitability was deteriorating over time, although the factory returned small profits in most years (see Figure 29 and Figure 30 below). However, the AIA was experiencing negative operating and net profits for most years.

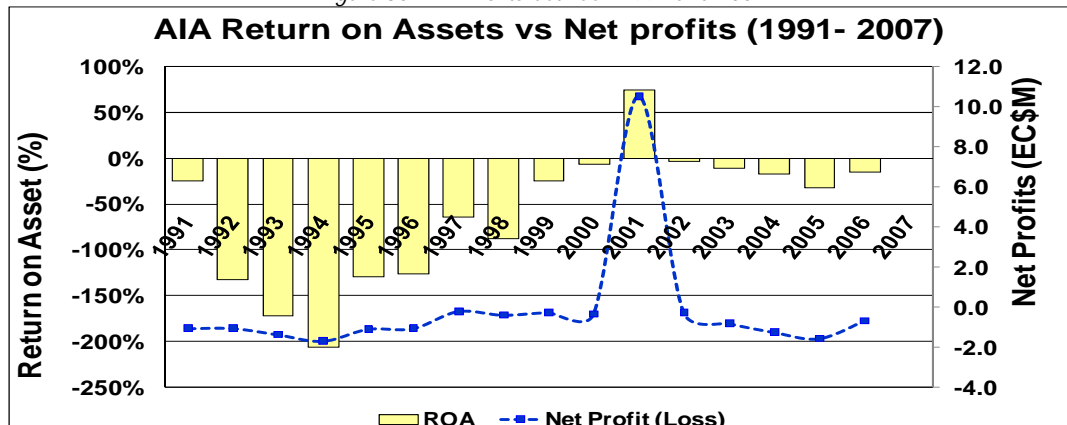
Figure 29: AIA Profit Performance between 1991 and 2007



Sources: Constructed from AIA financial reports

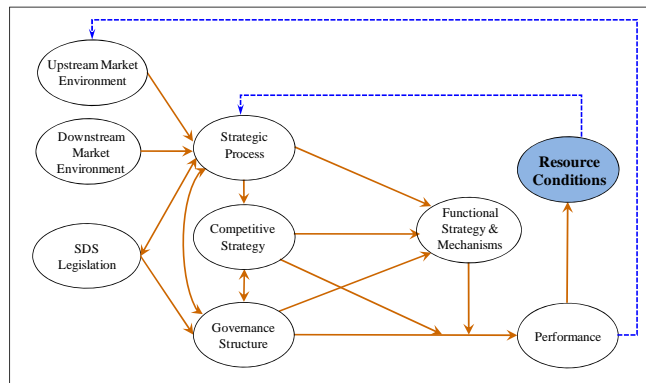
The negative relationship between the AIA’s revenue and net profits between 1988 and 1998 was driven significantly by the high interest’s payments during this period. AIA was relieved of these interest payments when the Government took over the AIA’s debt from the NCB. Subsequently, the performance improved, though remaining negative. Since then, the relationship appears to be positively related to the revenue performance. The positive performance noted in 2001 was related to the liquidation of the AIA’s assets.

Figure 30: AIA Profits between 1991 and 2007



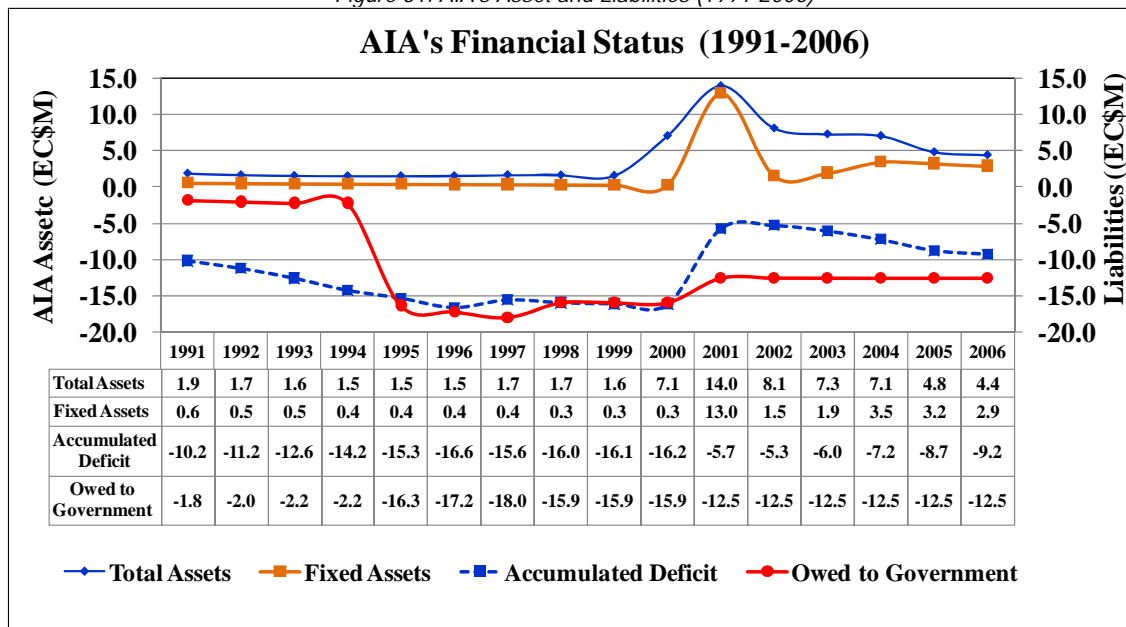
Sources: Constructed from AIA financial reports

5.3 Resource Base & Resource Dependency



The AIA’s financial resource based was weak throughout the period. The AIA’s assets base was relatively small and in comparison with its liabilities and accumulated deficit (see Figure 31 below). This was influenced by accounting practice as discussed previously. That is, that the AIA’s fixed costs were under-represented because they were not showing their real book value on an ongoing basis to show their real worth. However, both fixed and total assets spiked in 2001 as a result of this revaluation. The subsequent sale of the property in 2001 saw a portion of the proceeds of sales allocated as investments into the AIIP and the refurbishment of the AIA’s factory and relocation and upgrading of its pulverisation plants.

Figure 31: AIA's Asset and Liabilities (1991-2006)



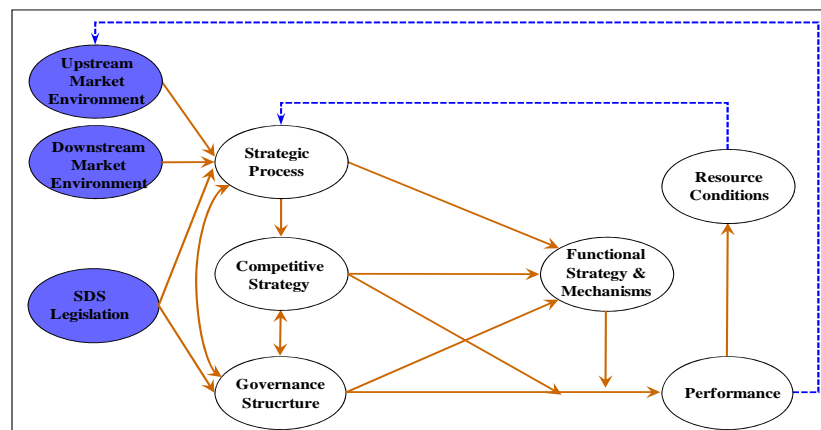
Source: constructed from AIA Financial Statements

The AIA’s was significantly leveraged, as illustrated by the large accumulated deficit in the chart above. This debt was incurred through two means. Firstly, the AIA

continuously used an overdraft to finance short term operating capital. However, the revenue from starch was often insufficient to pay off these overdrafts. An additional source of debt was through the practice of the Government making interest payments on behalf of the AIA - EC\$370,000 in annually from the 1980s up to 2000, and approximately C\$230,000 annually thereafter.

In 1995, the Government took over the AIA's debt, thereby relieving it of significant interest payment. However, this remained a liability due to the Government. With the sale of the Kingstown property in 2001, EC\$3.4M was used to write off a portion of this debt. However, the Association continued to incur debt through this means, adding EC\$4.5 between 2001 and 2006. Therefore, the AIA remained highly indebted to the Government.

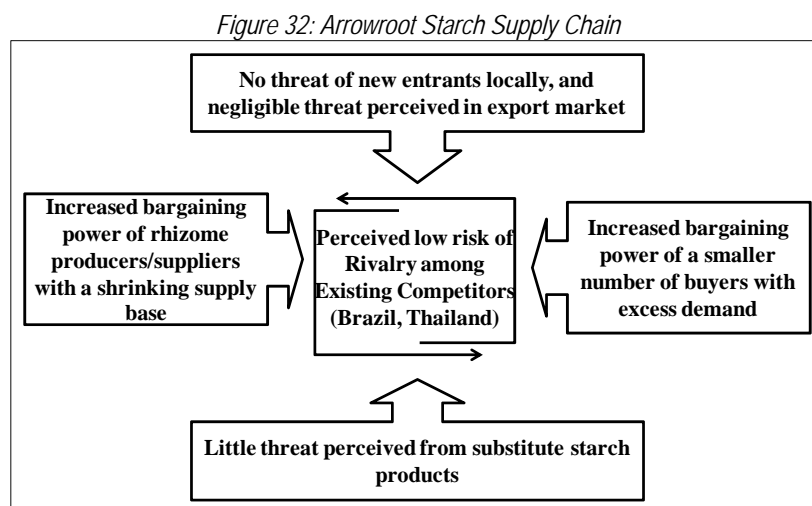
5.4 Drivers of Change in the AIA's External Environment



The results in this section are based on summarised interview data. It is written from the perspective of the informants, and describes the main external forces that influenced the AIA's choice of strategy, structure choice and performance. The key antecedent variables which directly influenced structure and strategy choice within the AIA were the market drivers (including the attractiveness of alternative crop and economic activities), the AIA Legislation, Government's policies and practices. For the purpose of analysis in this section, farmers are treated as suppliers, regardless of membership status.

5.4.1 Starch Industry Market Characteristics

The AIA enjoyed a relatively good competitive position with regards to the threats posed from new entrants, rivalry and substitutes. However, it was becoming competitively weak when compared to its buyers and suppliers (Figure 32). The factors underlying this weakness are further described in the subsections below.



Source: Constructed from interview data

5.4.1.1 Uncertainty of Supply and a Fragmented Supply Base in the Upstream Dyad

The AIA's processing performance was directly linked to the performance of the rhizome producers upstream (Table 17). The dynamics of this relationship are presented in a casual map discussed below, in line with Miles & Huberman (1994).

Table 17: Key supply-side data

Performance Indicator	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
No. of Farmers	54	43	33	22	105		245	260	350	323
Area cultivated (Acres)	135	115	86	30	175	248.5	283	350	419	400
Acres Harvested (Acres)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	417	
Rhizomes Harvested (Tons)	757	902	618	573	1396	1138	1561	2314	3233	3122
Average Farm Size (Acre)	2.5	2.6	2.6	1.3	1.8	N/A	1.1	1.35	1.24	1.2
Rhizome Yield (Tons/acre)	5.61	7.8	7.1	19.1	7.9	N/A	2.7	2.74	3.51	3.54
Rhizome/farmer (Tons)	14	21	18.7	26.0	13.3	N/A	3.2	3.6	4.2	4.4
Rhizome Price (EC\$)	\$.09	\$.12	\$.13	N/A	N/A	N/A	N/A	N/A	\$.18	\$.21

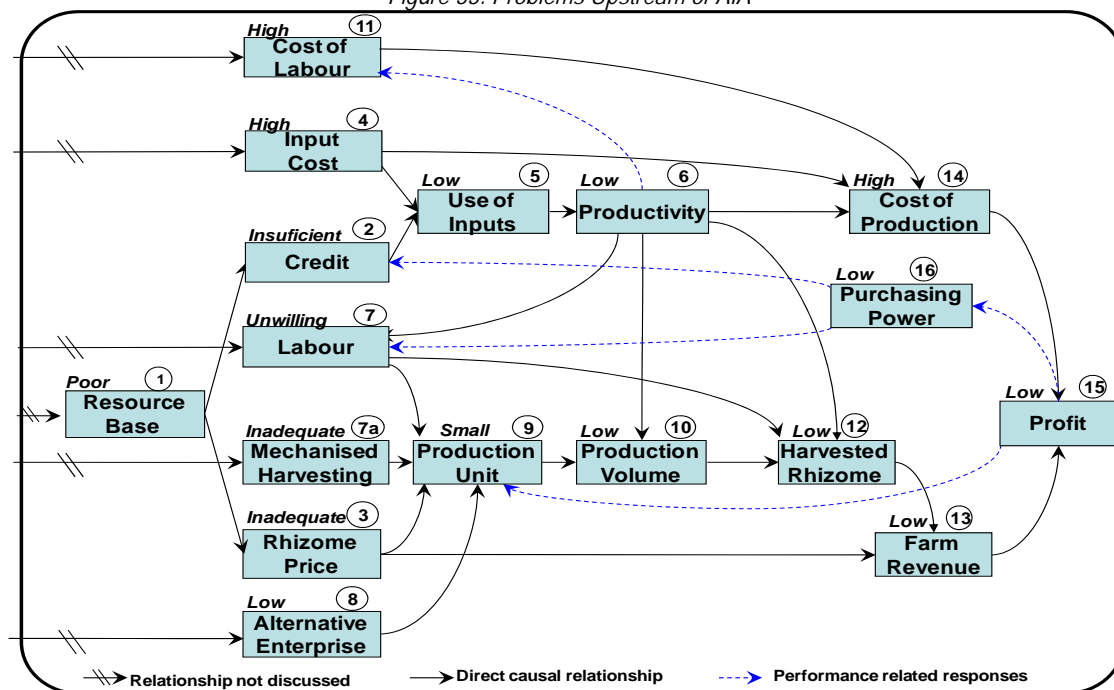
Table 17 Continued

Performance Indicator	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
No. of Farmers	298	280	172	N/A	143	N/A	N/A	N/A	212	114
Area cultivated (Acres)	399	368	220	200	117	168	400	407	309	96.3
Acres Harvested (Acres)	369	328	210	200	117	168	130	165	103	86
Rhizomes Harvested (Tons)	2846	2703	2112	1645	1559	1283	1938	1164	942	721
Average Farm Size (Acre)	1.3	1.3	1.3	N/A	0.8	N/A	N/A	N/A	1.5	0.9
Rhizome Yield (Tons/acre)	3.2	8.2	10	8.2	13.3	7.6	14.9	7.2	9.2	8.4
Rhizome/farmer (Tons)	4.39	1.003	8.85	N/A	10.9	N/A	N/A	N/A	4.4	6.3
Rhizome Price (EC\$)	\$21	\$21	\$23	\$23	\$23	\$25	\$25	0.25	\$25	\$35

Sources: Constructed from KAIRI report, AIA financial reports and other records

The low and fluctuating volumes of rhizomes harvested and supplied to the AIA (12) was directly dependent on the acreage of arrowroot cultivated (9) farm-productivity, the general unwillingness of was caused by The direct reasons for adjusting (reducing) the production size was he arrowroot cultivation (9) because of the difficulty in getting labour (7) or mechanical harvesters reap the crop, low rhizome prices and profits (3 and 15).

Figure 33: Problems Upstream of AIA

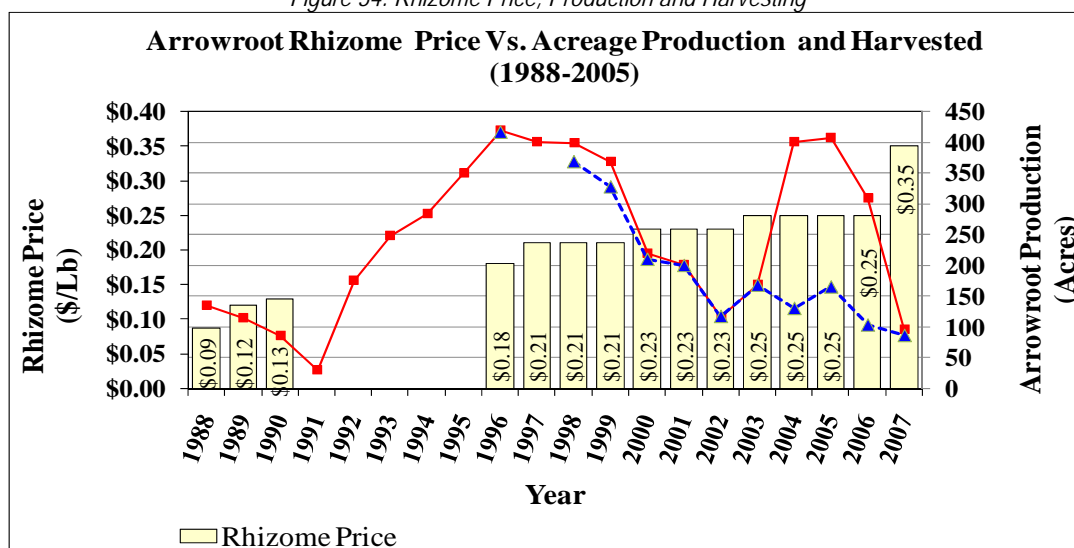


Source: Constructed from interview data

High costs of inputs and labour (11 and 4), low profits, (15), difficulties in attracting labour to harvest rhizomes (7) and the inability of the AIA to provide mechanised harvesters (7a). The perceived higher profitability and regularity of income from alternative enterprises (8), such as bananas and other root crop also influenced farmers to switch production or reduce the area allocated for growing the crop. On a positive note, farmers identified the lack of praedial larceny and a love for the crop as reasons why they still continue to produce it.

Of the above problems, interviewed farmers were passionate about the negative impact of price on profits as well as on the ability to attract labour. This was stated as the most significant reason for farmers reducing production or exiting the industry altogether. Informants noted that this problem become more acute in the recent past when the cost for labour and fertiliser increased significantly¹⁸. This price-production relationship is illustrated in Figure 34 below. However, despite farmers' displeasure with the rhizome price, there were periods when they rapidly increased the acreage of rhizomes produced. Therefore, it can be assumed that these increases were driven by non-price factors. Several varied reasons were offered by interviewees to explain this.

Figure 34: Rhizome Price, Production and Harvesting



Sources: Constructed from KAIRI report. AIA financial reports and other records¹⁹

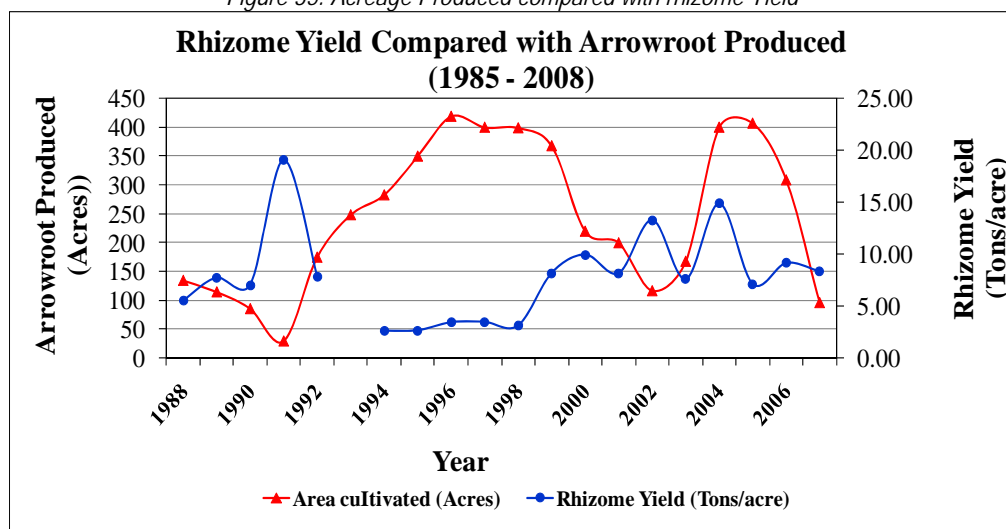
¹⁸ Assuming a yield of 25 Tons/acre, the 2001 COP estimated harvesting expenses at EC\$1250/acre (23%), and fertiliser expenses were EC\$138/acre (3%). By 2007, these costs had increased to approximately EC\$2000/acre (33%) and EC\$294/acre (5%) respectively.

¹⁹ 1991-1995 Rhizome price data could not be sourced.

The increased rhizome production in the 1990s was associated with two different phenomenon. Firstly, approximately 2300 acres of lands were distributed to small farmers in the arrowroot-producing zone. Secondly, as the banana industry faced price-based competitive pressures, marginal producers exited the industry in rapid fashion. In 1994, production had declined by approximated 4100 acres (Anderson, Josling, & Taylor, 2003). Consequently, farmers would have turned to the production of alternative crops, including arrowroot. However, arrowroot production again declined between 1998 and 2001 when there was a resurgence of banana production in the Langley Park and Orange Hill land reform areas between. This resurgence was associated with the commissioning of new irrigation schemes. The increased production in 2004-2005 was related to the use of production incentives by the AIIP. However, only a percentage of the planted acreages were harvested.

Apart from the effects of production size (9), the total volume of rhizomes produced (10), was influenced by low and fluctuating yields experienced (6). Farmers were adamant that this was due to the high cost of fertilisers and other inputs (4), and their inability to purchase optimal quantities, given their (5) diminished purchasing power (16), and the inability do so through the credit offering by the AIA (2). However, some AIA and Ministry of Agriculture officials were of the view that this was also caused by poor crop management on the part of farmers. Scrutiny of the data shows an inverse relationship between yield and production size (see Figure 35 below).

Figure 35: Acreage Produced compared with rhizome Yield



Sources: Constructed from KAIRI report. AIA financial reports and other records

While this study did not set out to explore the exact cause for this, thoughtful reflection on the case data suggests two possibilities for the fluctuating yield. The latter argument may be correct, it that the farmers who remained in production during difficult times may also be the committed and therefore took better care of their crops. Alternatively, it may be that the increased acreages occurred on marginal lands characterised by lower average yields.

The volume of arrowroot rhizomes harvested (see Figure 34 above) was influenced partly by the reluctance of labourers to harvest the crop (7), especially when yields were low (6) and partly to the restricted ability or unwillingness of the farmer to pay better wages, given their low purchasing power (16).

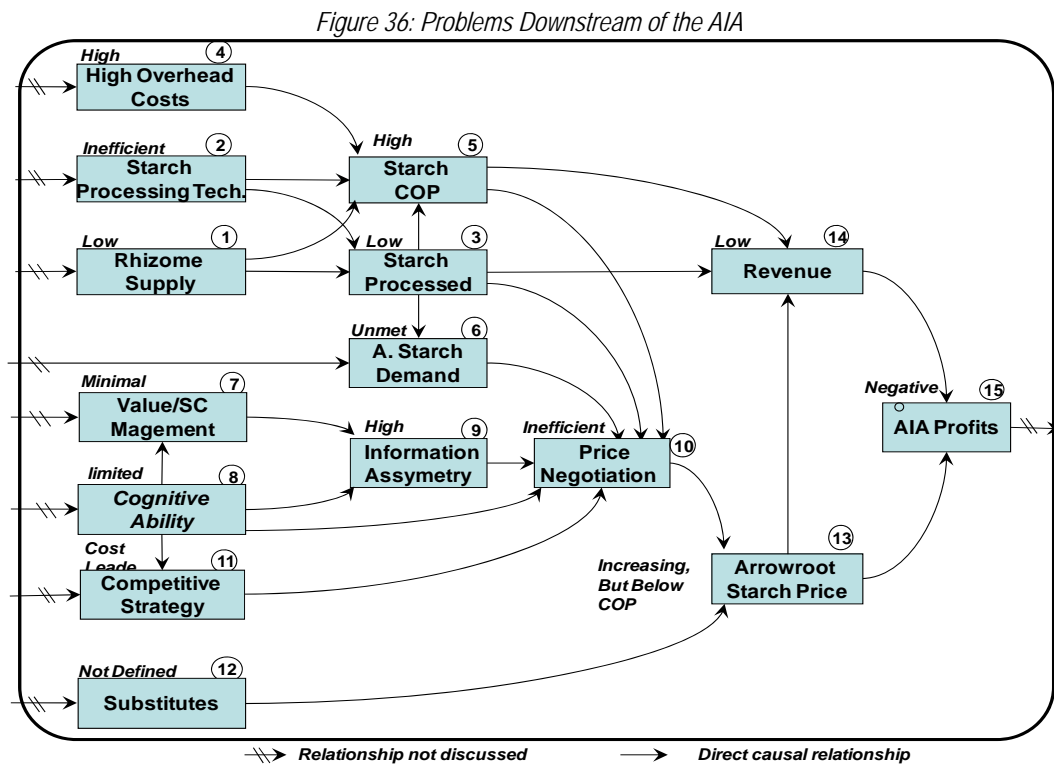
Apart from the contribution of labour and input expenses (14 and 4), to the cost of production (14), this was also significantly driven by low yields of rhizome (6). Farmers' revenue also varied with the volumes of rhizomes harvested (12), however, it was perceived by interviewed farmers that this was low because of the low rhizome price paid by the AIA (3). Consequently, the total profits experienced varied by volume, but also by the high cost of production discussed above (15).

To counteract small profits, growers who met the threshold of 3000 lbs of rhizomes were allowed to pay the wages of the factory workers and have their rhizomes processed. Interviewed farmers noted that this practice realised greater revenue – up to double at times, since they avoided paying all other costs of processing and with selling and general expenses. However, over time, as the AIA began to apply full costing, the potential profit of this practice declined. In response, farmers reverted to selling the rhizomes to the factory. Farmers perceived the AIA's deductions as a form of stealing.

Farmers were of the opinion that management and ineptitude at the AIA, and the overpowering control of Government as major the root causes of problems 2, 3 and 7a.

5.4.1.2 Excess Demand, Power Asymmetry and Sub-optimal Rent in the Downstream Dyad

Like the supply side factors, the relationship in the downstream dyad was characterised by uncertainty, but was also significantly influenced by other factors. These relationships are explained in the causal network below (see Figure 36 below).



Source: Constructed from interview data

The combined effects of low processing volumes (1) and the use of archaic, labour-intensive processing technology (2) led to the production of low volumes of starch at a high COP (3). At these supply levels, the AIA could not satisfy the demands placed on it (6). Consequently, the AIA adjusted the number of buyers and export destinations in order to assure greater levels certainty that orders could be fulfilled. Even so, the vast percentage of the starch was supplied to only two customers - one each in the UK and the US markets.

Transactions in this dyad were characterised by an untenable scenario, where the starch prices negotiated were continuously increasing (13) but below the full cost of

producing the starch (5)²⁰. Although the negotiation process took into consideration the demand (6), availability of cheaper substitutes (12), volumes of starch processed (3), and the COP, it was inefficient due to the influence of the poor business models and Directors and Management (8) and inefficiency supply chain governance led to the competitive strategy (7) and used the COP at the factory levels rather than the full COP which took the overhead cost into consideration. The significance of this inefficient process was noted by several farmers, and can be summed up by the remark made by one respondent, “*the [income from the] dance couldn’t pay for the light*”.

While the relationship between export volume and starch price appears to be the result of a market mechanism; that is, the scarcity of arrowroot starch was driving price. However, this was moderated by the negotiating practice of the Board and Management. That is, the request for price in which to increase arrowroot prices to cover the increasing cost of manufacturing at the factory level.

Although most interviewees believed that there was none, the deceptive marketing of other starches or blended arrowroot starch as ‘Genuine St. Vincent Arrowroot Starch’ was highlighted as a potential threat to perceived value image of the AIA’s product. This point was supported by market studies by Coopers and Lybrand and CIRAD reports (1980s and 1990s). The AIIP attempted to brand the product, but this did not go beyond the design stage. The market drivers were only part of the variables influencing the AIA. The other significant factor was that of Government’s policies and legislation.

5.4.2 Government Policies and Legislation

As a State Owned Enterprise (SOE), the AIA was significantly influenced by Government’s legislation and policies. The unchanging AIA legislation was identified as a significant influence on the AIA’s structure and strategy, in that it provided a stable structure, strategic process and resourcing framework by which the AIA functioned.

²⁰ COP [Total COP at factory ÷ Starch Produced] + [(administrative and selling expenses x 70%) ÷ Volume of starch produced(sold)]

Two significant policies which directly influenced the AIA between 1988 and 2007 were the intent to improve and ultimately privatise the AIA, and the decision to its Kingstown property. In 2001, the Government signalled its intent to improve the fortunes of the highly leveraged AIA by adopting an EC\$15M, 5-year Strategic Action Plan (SAP). This was significant, in that it proposed the partial privatisation of the AIA. Concrete moves followed in 2002 with the implementation of the Arrowroot Industry Improvement Project (AIIP). Another Government policy was the decision to sell the AIA's property in 2001 in order to finance the implementation of the above SAP.

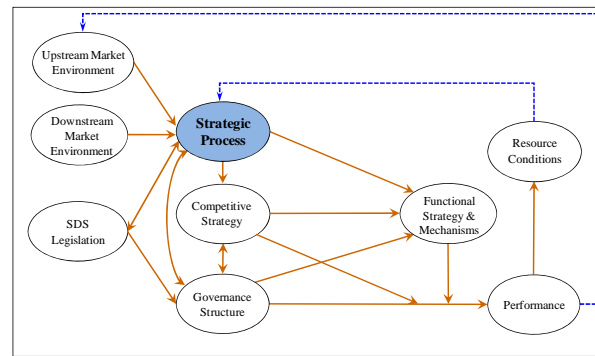
Government's national and sectoral policies also influenced the AIA through indirect effects. One of these was the land reform policy of the 1980s to 1990s, which resulted in the acquisition of seven (7) estates and subsequent re-distribution of 17,047 acres of these lands to small farmers across the country. Of this, approximately 2300 acres were distributed in the traditional arrowroot growing region (John, 2006). This was partly responsible for the increase in production of the early 1990s. A second policy was the support of Government to Banana production, including the introduction of an EC\$25M irrigation project in the arrowroot zone.

5.4.3 Alternative Economic Enterprises

The fortunes of other economic activities partially influenced the AIA. Interviewees noted that the arrowroot industry – like the rest of the agricultural sector – was losing potential workers to the construction and service sectors over time. Wages and working conditions were deemed to be more attractive to these workers. This placed pressures on arrowroot producers to raise wages to comparable levels in these sectors.

In the agricultural sector, banana production significantly influenced arrowroot production. Hence the growing banana industry between 1988 and 1992 coincided with the declining acreage of arrowroot production. Conversely, the downturn in banana production in the mid 1990s coincided with increasing arrowroot production.

5.5 A Captured, Bureaucratic Strategic Process



The AIA's strategic process occurred within the framework of the AIA legislation. This framework was inherently weak, in that it was captured by the overwhelming power and influence of the Cabinet and relegated the Board to carrying out a rubberstamping function. This was compounded by the characteristics of the Board and the weak financial base which placed restrictions on alternative choices of strategy and structure. Except for the development of the SAP between 1999 and 2001, the strategic process excluded key stakeholders from strategy formulation and problem solving. In this context, the AIA's strategic process had a stabilising effect on the AIA's choice of competitive strategy, structure and strategic moves.

5.5.1 AIA's Strategic Intent and Vision

The AIA legislation stipulated the roles and functions of key players in the AIA. However, the Government retained with significant authority and control over all decisions regarding the deployment, use and disposal of resources. Consequently, the Board, Management and Members of the AIA Association depended heavily on the strategic directions laid out by the Government. These were top-down oriented and were usually announced during the annual budget speeches of the Prime Minister. The other source of strategic direction was from the Minister of Agriculture.

The only notable departure from this tradition was consultative process by which the SAP was developed. This involved the extensive canvassing a wide range of views from direct and indirect stakeholders, in an iterative process to determine the best path by which the AIA's could have been turned around. This led to the development of a comprehensive Strategic Action to be implemented over five (5) years. See Appendix 3

to show aspects of this SAP. Written Vision and mission statements were also developed as part of the SAP.

The proposed vision of the AIA was *“To be a profitable, viable and unique in the quality of its Arrowroot and tropical starch products while providing its farmers and stakeholders with a good income.”* This statement suggested the broadening of scope to include additional starch types and addressed the concerns of price to farmers. The road map by which this vision was proposed to be implemented was found in the mission statement, which stated, *“The Arrowroot Industry Association endeavours to provide high quality starch products that are competitive, providing a good return to its shareholders and an equitable income to its farmers and other stakeholders, while maintaining its unique utility in the global food and Industrial sector”*

Although these statements were central to the process of transformation, it was evident that they did not guide the operation of the AIA or development of strategy by the Board. For example, in 2004, after being on the job for one month, the then GM wrote, *“Observing and interacting with staff one cannot but sense a general lack of purpose. I am suggesting that the association adapt a Mission and Vision statement to remind ourselves of what we are about and to keep focus...”*²¹. Even in 2007, during interviews, Directors could not readily recall the contents of these statements. This was related to the general tendency among Board members to reject anything associated with the AIIP; since they did not share the vision of the AIIP Manager regarding how the AIA should be ultimately restructured. At the heart of this was the proposal to split the AIA into a business and a farmer entity.

5.5.1.1 Legislated Objectives

Strategy implementation was also guided by the roles and objectives laid out in the AIA legislation (see context chapter). However, interviewees noted the weak financial base of the AIA as a reason for less than satisfactory implementation of desired strategies to implement these objectives. This affected the ability to pursue strategies to motivate production of rhizomes. Apart from the legislated objectives, the

²¹ General Manager’s Monthly Report, October 2004.

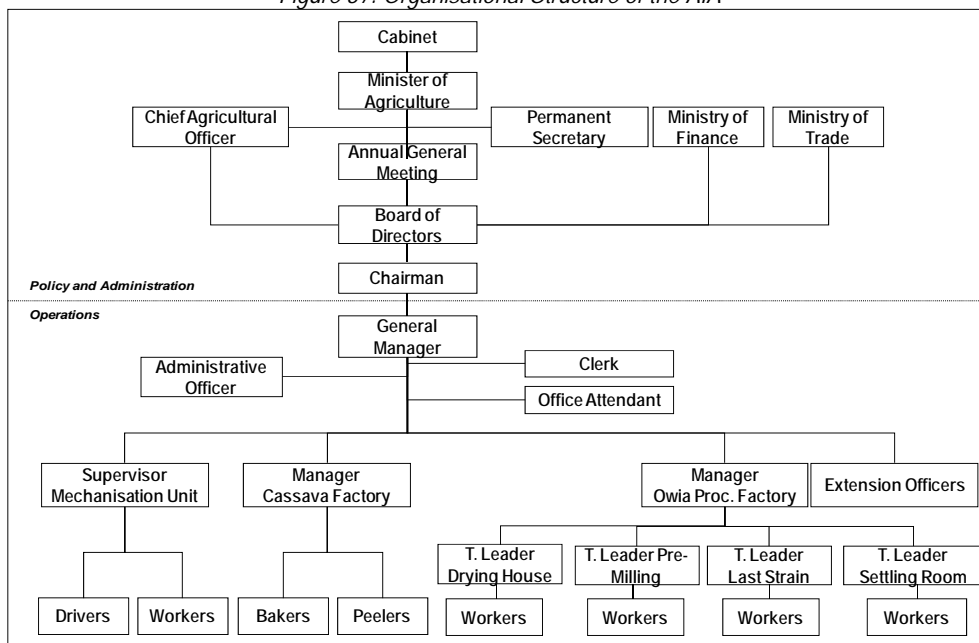
Board of directors identified the Government’s requirement for the AIA to create of employment in the indigenous Garifuna community as an additional objective of the Board. This latter point was partially responsible for the high wages paid by the AIA. However, the inability to hire and pay for specialised skills such as those related to management and marketing considerably limited the quality of advice and therefore the quality of strategic making at the Board level.

The decision to expand operation to include the Mechanisation unit (tractor service) and in 2003 and the Cassava Factory in 2004 was externally imposed by the Cabinet and the Ministry of Agriculture. This placed additional burden on the management and resources. Furthermore, the lack of core competence in these areas constrained the implementation of programmes associated with them.

5.5.2 Key Players in the Strategic Process

The role played by individual categories of decision-makers (Cabinet to General Manager) influenced the formulation and implementation of the AIA’s strategic intent outlined above. Generally, the members at the top of the hierarchy were more influential and had greater control of the process and outcome. The sub-sections below outline these relations.

Figure 37: Organisational Structure of the AIA



Source: Developed from AIA Legislation and Interview with the General Manager

5.5.2.1 Cabinet and Elected Members of Parliament

The Government retained its final decision-making and control role. However, its powers and influence were perceived by interviewees to be all-encompassing, and extended even to the day-to-day operations of the AIA. To facilitate this, Members of Parliament (MPs), and particular those associated with the arrowroot-growing regions were consistently given prominent position in the AIA. For example, for the period under review, the MPs occupied the Chairman position between 1988 and 1999. As Junior Minister in the Ministry of Agriculture, the current MP was assigned the responsibility for the arrowroot industry between 2001 and 2005. On re-election, this responsibility was retained when he was made Minister of Agriculture. The reason for these prominent appointments was related to the socio-political and economic importance of the crop to the arrowroot growing area and the potential impact on the political life of the MP. One interviewee encapsulate it as, “my political future was hang up on it”.

Another significant role of the Cabinet related to the appointment of the Chairman, deputy Chairman and nominated members. Although the constitutional responsibility lies with the Governor General, it is widely agreed among most interviewees that the selection were made by Cabinet members (including the elected MP), and based on a system of partisan-political patronage.

All interviewees agreed that decisions regarding policy and strategic intent were mostly unidirectional and emanated from the Cabinet. However, some Government officials pointed to the tendency of the Board to defer these decisions to the Cabinet and or the Minister/MP to determine. Even so, Board members and Managers highlighted cases when Board proposals were rejected or ignored. Examples of these include decisions against setting of rhizome prices which were more satisfactory to producers, setting tractor fees which cover the cost of operation of the tractor service and the sale of the Kingstown property at a value lower than the Board’s wishes. One reason given for the small price increases granted prior to 2007 were that the AIA needed to balance the need to pay its debt with that of offering better prices to producers.

It was clear that the Government intended to acquire the property, but needed the Board rubber stamp the process, although some interviewees were quick to point out

that it was recommendation by the KAIRI consultant to finance the SAP. However, this action seemed inevitable and was long in coming, given that the Government through its agents were articulating this from as far back as 1984²². The private sale, which took place, netted EC\$11.5M, - EC\$1.3M below its book value and EC\$4M below the Board's requested price. Though speculative, interviewees also suggested that it might have obtained a higher price on the open market. This mood was captured in the Manager's communication to the Board in 2001:

*"...The Arrowroot Industry Association's team informed the Meeting that an offer of \$10,000,000 was unacceptable given the current valuation which puts the value at some \$12.8 million. After some lengthy discussion, Mr. Maurice Edwards [Director General of Finance and Planning] suggested that some workable compromise be arrived at, given that the cabinet had already agreed to sell the property to the NIA. In his words, it was now a matter of agreeing on a reasonable price and to give transparency to the transaction. On this note the Meeting shifted to a compromise mood...."*²³(Source: DFFP correspondence (Ref MF/564), November 2005)

While the Government seemed to have unilaterally in determining these policies, it may have adopted these positions by default, given the perceived lethargy of the Board, which often neglected to make policy recommendations to the Minister of Agriculture. Support for this point was observed in a correspondence of the Director General of Finance and Planning (DGFP), who wrote, *"Central Government is still awaiting detailed proposals from the Arrowroot Association for the restructuring as indicated to the Manager in my letter to him dated November 12, 1999..."* (Source: DFFP correspondence (Ref MF/564), November 2005)

²² Minutes of Board Meeting 22nd August 1985,

²³ Manager's Memorandum to the Board, 5th March 2001.

5.5.2.2 The Board of Directors

The structure and function of the Board remained unchanged over the period of study; as a result it was structurally weak and performed poorly.

5.5.2.2.1 Structure and composition

The Board remained structurally unchanged over the period of study. Government officials and Board members were of the opinion that the membership rules - as laid out by the AIA Legislation - excluded significant numbers of potential farmers from being recruited to the Board. This naturally reduced the pool of talent available to the Board. For example, over the last three (3) years, more than 80% of farmers were not qualified for directorship. In fact, a review of minutes show that the records shows that over the last twenty (20) years, directors were elected from a virtual pool of approximately thirty-five (35) producers. Interviewees also noted that the annual elections of members led to discontinuity in the planning and execution of strategy by the Board. This argument is weak, given the fact that there was never a wholesale change in members and that there was a virtual recycling of Directorship.

5.5.2.2.2 Educational Characteristics

The bigger challenge to Board performance however related to the low levels of business education and skills among many of the elected and nominated Directors. As a result, Directors had limited business models from which to make decisions. This in turn contributed significantly to a high level of bounded rationality, especially when making decisions of a highly technical nature or relating to long-term business strategy, marketing and policy. On the other hand, the educational level of ex-officio members and to some extent the Chairman was much higher.

This scenario created a dynamic between these categories, where the ex-officio Directors mostly had their way on matters relating to policies, finances or technology. Conversely, they adopted a passive facilitating role on these issues, and deferred such decisions to the ex-officio members, Minister of Agriculture and or the Cabinet. However, they were quite vociferous on issues impacting on rhizome production and farm profits. This practice may have led to a perception among some interviewees that Board members were only concerned about farmers-oriented issues and immediate

rewards rather than that the long-term view of the AIA. Despite the obvious weaknesses in the capacity of these Directors to address issues of strategy and policy, a review of Minutes reveals that the Board – including nominated and elected members - occasionally pointed to the need for the Board to address the AIA's vision, long-term plans and policies.

The Board operated finance and marketing and grading committees between 1988 and 1997. Ironically these committees were abandoned between 1998 and 1997 when the performance of the firm was worse. However, attempts were made to incorporate outside skills in adhoc and committees to address the same. For example, the Cassava Task Force (CTF) was established by the Ministry of Agriculture to assist with developing the cassava enterprise. The CTF was perceived by the Board and the then manager to be successful in this objective, by was constrained by the bureaucracy of the strategic process.

5.5.2.2.3 Leadership

Effort was made to ensure that the educational characteristics were of a high standard, to facilitate this, there was a tendency to nominate a non-member to the Board and appoint him as Chairman. The widely accepted view of interviewees was that the Chairman's appointment is highly influenced by political patronage. As such, the perception was that, regardless of his educational characteristic, the Chairman deferred to the political authority that was responsible for his appointment. Furthermore, the Chairman's power and influence was also based on that of the appointing Politician. This may be a reason for the change in Chairmanship with the change in Government.

The average tenure for a chairperson in the AIA was just over three (3) years. However, the Chairmen who were also politicians both had five (5) year terms (see Figure 38 below). The appointment of these Chairmen/MPs was perceived to be strategically advantageous in the following ways: (1) it was easier and quicker to directly lobby and get favourable support the Prime Minister/Minister of Finance, (2) individuals, including from some from the private sector, provided more support to the AIA. This was probably based on the expectations of political favours, and (3) the ability to motivate political supporters to get back into producing the crop.

Despite the increased production experienced during their incumbency (1990-1999), the performance of the MP -Chairmen was similarly difficult to delineate, this is because the stronger association given by interviewees to the effects of the fortunes of the banana industry and the increased availability of lands through the land reform programme. In fact, some interviewees were doubtful that there was any significant influence of these individuals on production.

Figure 38: Tenure of Chairmen (1985-2008)

Tenure of Chairmen (1985-2008)																							
1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Grafton Vanloo	Julian Pitt	Senator Owen Walker (MP)			Monty Roberts (Elected MP)				Julian Pitt			Allison Balcombe		Peter Ballantyne									

Source: Constructed from AIA Board Minutes

5.5.2.2.4 Board Functions

All interviewees were of the opinion that the Board did not engage in substantial strategic formulation. A review of Board minutes demonstrates that agendas for board meetings were invariably the same from month to month, and was mainly focussed on recurring issues under “Matters arising out of the Minutes, and ‘Other matters’”. Rarely were there special meetings to discuss policy or strategic imperatives. Where the Board did deal with long term strategy, it was limited to approving or modifying those, which originated from Cabinet or the Ministry of Agriculture (MOA). Even so, they were mostly handled through sub-committees, including the Chairman, and at times, the deputy chairman along with outside individuals. Some government and AIA officials pointed to the general lack of business acumen or experience among Directors as the reason for their non-selection to these adhoc committees. Additionally, decisions relating to unfamiliar or new issues, such those relating to the cassava and mechanisation enterprises were mostly deferred the General Manager. Similarly, marketing (including product development negotiating long-term prices), investments and governance were generally avoided.

As a consequence, the Board was essentially a rubberstamp for the decisions made at Cabinet level. Examples of decisions made external to the Board and then adopted were the recruitment of at least three of the General Managers, issuing of

license for the export of starch²⁴, continuing the contract of the East Caribbean Agency as a marketing agent, despite its heavy debt to the AIA, and the development of AIIP. The role played by the Board was more evident in the implementation of short-term strategy, within the framework of the annual programme. These were farmer-oriented and also developed as a requirement for the MOA and MOF financing.

The Board did not engage stakeholders on an ongoing basis, as there were no mechanisms to facilitate the active input of members and other key stakeholders into the decisions of the Board on a regular basis. This opaqueness in operation of the Board created gaps in the official knowledge regarding the decisions of the Board. This in turn generated mistrust of the Directors and Managers. In some cases, some directors are seen as traitors for not delivering on promises made when lobbying to be elected to the Board – especially those relating to increasing of rhizome prices.

The Board's role in the financing was almost completely focussed on bridging the gaps in the monthly cash flows of the AIA, rather than long-term capital investments.

The main source of financing was through the overdraft facility, which required government support. This was also the main source of the AIA's growing indebtedness, as it continued to use borrowed, despite being unable to meet the overdraft payments. The reasons provided for such was the need to avoid the AIA and the arrowroot industry from collapsing. However, given that this was significantly eroding the value of the AIA, it may be that the Board and Cabinet acted in collusion and with mutual self-interest rather than in the interest of the AIA. That is, the Board may have acted inadvertently to facilitate the Government's desire to implement its employment and economic objectives for the arrowroot growing community (a national good). On the other hand, the Board was overcoming the short-term objective of overcoming cash shortfall. Regardless of the exact motive for this practice (which may be uncovered by other studies of the internal operations of the Board), the ultimate goal seemed to be the economic survival of the farmer – not the AIA.

²⁴ Minutes of 18th April 2002

5.5.2.2.5 Performance Evaluation

Evaluation by the Board level was superficial and limited to a review of rhizome and starch production. As one Director quipped, “*I prefer to call it a post mortem more than an evaluation anyway*”. This was used as a basis for production planning in the ensuing year. Apart from this post mortem, the Board monitors the Manager through monthly plans and reports at their monthly meetings. The report addresses the performance of the various enterprises, the staff, and on income and expenditure. The Board does not engage in any formal evaluation of its own performance, though members may ascribe the production performance with its own successes.

Government agents and the Directors of the current Board concluded that it was ineffective in adding value for several reasons. Firstly, it was institutionally weak due its inability to recruit desired skills, even from among non-member producers. Interviewees were of the opinion that the majority of Directors were either were political appointees or strong supporters of the politicians and therefore deferred to their wishes in return for political patronage. This weak board was preoccupied with operational level issues and with lobbying Government for financial support to meeting the cash shortfall of the AIA rather than pursuing long-term capital financing. This ultimately led to the AIA incurring huge debts. Furthermore, the Board was also inefficient in harnessing the resources and skills of the untrusting producer stakeholder. The performance of the board was influenced by the performances of the Chairmen and the Managers.

5.5.2.3 General Meetings

The General meeting was the primary mechanism for stakeholder interaction, information sharing and problem solving. However, this forum was historically weak and became progressively ineffective as the numbers of producers who were eligible for membership declined. For example, in 2001, the number of members was 32, in 2006 this was 12 (or 7% of producers), 2007 – 19 (18% of producers), 2008 – 10 (11% of producers)

Farmers were of the opinion that the main goals of these meetings were to elect five directors to the Board of Directors and to provide a ‘talk shop’ for Government

officials. They viewed these meetings as one-way forums, which did not solve the problems raised by farmers. For example, the constant requests to have increases in rhizome price that matched the rate of inflation for inputs and labour expenses were hardly ever met. However, some Government Agents and Directors have countered, that farmers needed to be pragmatic and weigh the need for the AIA to settle its high debts with that of increasing rhizome prices.

Members were generally indifferent on the issue of monitoring the Board and Management. They expressed the view that such actions would not have made significant difference to the decision-making process or to the outcome of such. This may have led to them adopt a passive and cynical attitude toward carrying out their role in the AIA.

To facilitate information sharing with the growing of non-members, the AIA held other meetings - albeit infrequently - to inform these producers of the AIA's plans, and to receive their feedback regarding production problems. However, these producers expressed the view that they were excluded from real decisions. Furthermore, like members, they were also cynical of the ability of these Meeting to bring about solutions to their problems. Furthermore, these meetings were held infrequently.

5.5.2.4 General Manager

Apart from the duties stated in Act 20, the responsibilities of the General Manager (GM) were expanded in 2004 to include the Mechanisation unit, and Cassava Factory. Specifically, the GM is charged with the responsibility of negotiating starch price, mostly without the advice of the Board or the use of an agreed to formula. Seven (7) persons occupied the seat of General Managers since 1985, with an average employment life of 3.5 years (Figure 39), with five (5) of these Managers were employed in an acting capacity, with the last four appointments were politically highly influenced transfers from the Public Service. The AIIP Manager briefly held the Position in 2003/04, based on the recommendation of the Board.

Managers were considered weak and deficient in the skills required to perform all their functions at the AIA. This was due to a lack of a market for management

workers within the industry, its inability to attract such skill competence from outside due to its poor financial status and image.

Figure 39: Tenure of Managers (1985-2008)

Tenure of Managers (1985-2008)																							
1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Emmanuel Francis	Alonsoe Munroe (Ag.)		Vacant			Harold Fraser						Noel Cooke	Glenn Browne	Markley Gill (Ag.)			Cauldric Browne (Ag.)						

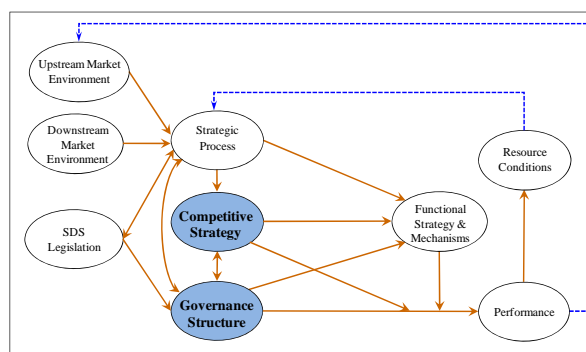
Source: AIA Board Minutes 1985-2008

These managers were mostly transferred Public Servants with little or no experience of management in private sector setting, and were perceived to conduct their jobs in a bureaucratic manner. Given their limited training and experience, these managers may have also suffered from bounded rationality. This was critical to the Board’s performance, in that they were unable to advise the Board sufficiently on some matters.

The primary tool used for planning and implementation was the annual work plan for the AIA. This plan covered administrative, operational and field elements, but was void of activities relating to financing, marketing and policy implementation. Though heavily targeted at production, these plans were developed internally between the Board and Management and without input from the Members or non-member producers. This plan is submitted to the Board for approval. There is no strategic or marketing plans developed at this level. This plan is then presented to the Extension Staff, who subsequently promote the production targets and provide production support to the farmers. Thereafter the Extension Staff submits reports of production and related issues to the Manager on a monthly basis.

Managers may have shirked in carrying out some of their responsibilities. One reason for this was the absence of financial resources to pursuing preferred alternatives. The second issue related to the moral hazards, which accompanied some decisions if they were unfavourable to the politicians. For example, the issue of employment caused significant tensions between GM and the MP. The threat while not explicit was evident. As One GM remarked, “Lightening might not strike per se, but then when you want other demands that you require the politicians to make, you might be met with some resistance. Or you might be getting calls in the night....it’s not like you gonna drop dead”

5.6 Constancy in the AIA's Structure



While the conditions in the AIA's external environment such as the effects of high cost of labour and inputs on production costs, and the relative strength of buyer and suppliers suggested that the SDS should pursue a cost leadership strategy, this was misaligned and inappropriate. The major weakness of this choice of competitive strategy was that the fluctuating and unpredictable supply of rhizome rendered this strategy ineffective. That is, the AIA could not achieve economies of scale or scope due to the small volumes of rhizomes processed. This was compounded by the high wages associated with an overstaffed operation. Furthermore, the AIA could not internalise these costs sufficiently through vertical integration and preferential access (SDS). Secondly, since the AIA customers appeared to be price insensitive and were willing to pay for the desired specialised functions of the St. Vincent arrowroot starch. Hence the AIA may have been better served by pursuing a differentiation or focussed strategy, to overcome the high costs.

The reason offered by interviewees for the retention of the cost leadership strategy was due to the weak resource base, the lack of resources to finance the anticipated changes to the marketing infrastructure and processing technology.

5.7 Constancy in the Governance Structure

The context variables (including the low and uncertain supply of rhizome, the high cost of producing starch, and the inability of the AIA to capture and redistribute better rents for itself and the upstream suppliers), did not influence substantial change in Governance structure. This inertia prevailed even after several commissioned studies in the 1980s and 1990s, which recommended both strategy and structure changes. Most

interviewees pointed to the restrictiveness of the AIA Act (Act 20) in preventing desired changes. As a result, the AIA continued to co-ordinate across a dwindling number of small producers, and low production volumes. The AIA was increasingly becoming obsolete as it could not achieve costs low production cost (scale efficiencies).

The Government's reluctance to engage in legislative reform contrasts with its response in the banana industry, which was experienced turbulence in the 1990s due to strong price competition from cheaper Latin American banana. The strategy employed to counteract the declining profits was to integrate downstream by engaging in the shipping, ripening and distribution activities in order to capture a greater percentage of the banana profits. To do so, the Governments and Banana Associations of the Windward Islands formed the Windward Island Banana Development Company (WIBDECO) in 1996. This joint venture company further entered into a partnership with Fyffes to form WIBDECO UK (Anderson et al., 2003) to leverage their resources and their core competencies in a £40M deal.

Given the urgency of the strategy and the importance of Banana to the SVG economy²⁵, the Government may not have been at liberty to exercise a unilateral prerogative. Furthermore, inaction may have led to economic collapse. Conversely, arrowroot's contributing to GDP was never more than 0.14 %. Furthermore, its economic activities were restricted to a rural section of the Country. Therefore, there may have been little pressure for the Government to act on what may have been a low priority issue, given the relative unimportance of the crop at a macro level. The Government's reluctance to act similarly with the arrowroot industry is explained in the following passages.

In the 2003 budget address, the Prime Minister declared, "The administration and management of the AIA will be restructured and strengthened to ensure efficient management of the operation". However, AIIP did not address the restructuring proposals in strategic plan of action developed by KAIRI. Some interviewees were of the opinion that the Government was factoring in the political implications of such

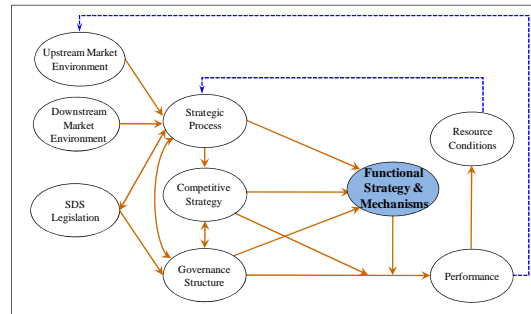
²⁵ During the period of restructuring it contributed an average of 13% to GDP and was the major employer and foreign exchange earner

restructuring, including the desires of farmers to remain an active part of the management of the AIA. The current Minister of Agriculture sums it up when he explained “...the Government may not free up to private enterprise without having farmers represented”. Board members and the AIIP Manager both agree to the fact that there was mistrust and tension surrounding the articulation of changes to the structure and vision of the AIIP. The discomfort with this change was evident in the posturing between these two parties, which led to a Cabinet decision not to proceed with the plans as put forward by the AIIP Manager. The attempt to change the internal dynamics without the necessary restructuring was aptly described by one interviewee as “Putting new wine in old wineskins”. This was further explained as followed:

“We want to have a modern industry, but to retain it in an umbrella of the old. So when that new begins to move and position itself, it must fracture that umbrella – it must bust it tear it here and there. And that didn’t seem to go down well. In other words people still wanted to hold on to the original. The old law was still in place. The overriding influence of the political directorate was still in place and so the thing didn’t go to its full extent”.

There was no further implementation of the SAP subsequent to the termination of the AIIP, neither was there any other form of restructuring. This decision may have been a way of hedging against any negative political consequences on the run up to a National election. However, the Government has continued to project the policy of restructuring. In the 2006 Budget address, the Prime Minister stated that, “*further revitalization of the industry will continue in 2006, in accordance with the strategic action plan*’. Similarly, in his 2007 budget address, he stated that “*Critical to the revitalisation of the Industry is the restructuring of the entity which manages it. At the point of data collection there was no restructuring.*

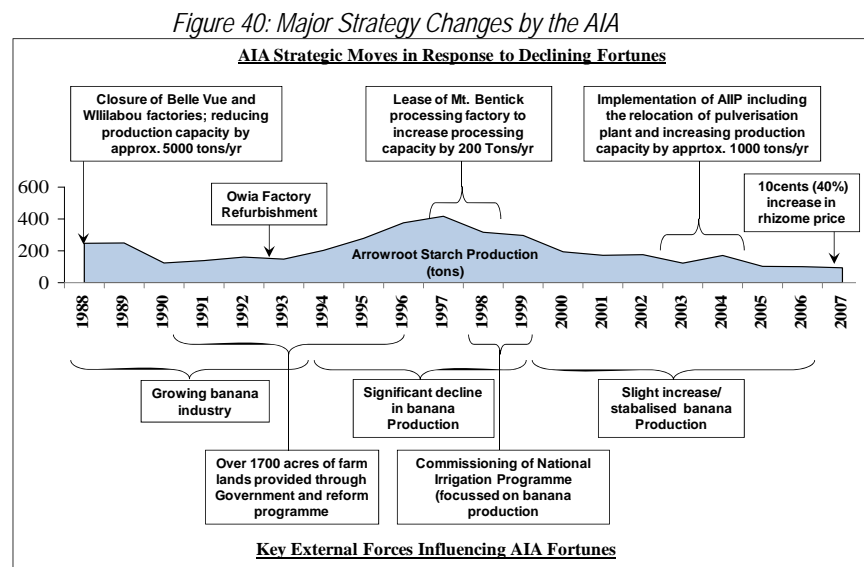
5.8 Strategic Moves, Functional Strategies & Mechanism



In the absence of major changes in the competitive strategy and structure, the AIA engaged in attempted to improve performance through other firm functional level strategies and mechanisms.

5.8.1 Major Strategic Moves

The major strategic moves by the AIA are highlighted in Figure 40 below.



Source: Constructed from interview data and other AIA documentation

5.8.1.1 Refurbishing the Owia Factory

The industry improvement and revitalisation programmes were implemented in the period prior to 2002. They were aimed at improving processing capacity and efficiencies through production and processing technology improvements. They were in essence piece-meal implementation of some recommendations from the several industry

studies. In the absence of cash from operations, these efforts were primarily financed by the Government through subventions.

The refurbishment of the Owia factory in 1993 was part of a broader proposal by the Ministry of Finance to improve the AIA. It attempted to reduce the cost of production by improving processing efficiency. This move coincided with the increases in rhizome production in the 1990s. The strategy was successful in increasing the percentage of Grade 1 starch in 1995 and 1996²⁶, but did not result in any significant improvement in overall starch yield.

5.8.1.2 Leasing Processing Capacity

The next major move was to increase additional processing capacity in response to the increased production and supply of rhizomes. This was done by leasing the Mt. Bentick factory from 1997 to 1999. However, the implementation coincided with the decline in supply as farmers exited the industry. There were thereby resulting in excess processing capacity.

5.8.1.3 Arrowroot Industry Improvement Project

The next major strategic move and by AIA was the implementation of the AIIP. This was The AIIP was implemented as a first phase of the KAIRI-Strategic Action plan (SAP), which aimed to make the AIA financially viable by improving efficiency through production expansion, farm productivity improvement and factory upgrading. The KAIRI consultancy recommended several actions in order to make the AIA viable (see Appendix 3 below.) The AIIP objectives were:

1. The relocation and renovation of the pulverizing plant from Kingstown to Orange Hill,
2. Relocation of the Head Office to Orange Hill,
3. Renovation and improvements to the Owia factory,
4. An increase in the acreage under production from the present 150 acres to 450 acres during the year,

²⁶ Source: National Budget Address 1995 and 1996

5. Expansion of mechanised cultivation and harvesting,
6. Application of various multiplication techniques including tissue culture to propagate new arrowroot varieties,
7. Registration of the “Genuine St. Vincent Arrowroot Starch” brand.

These objectives were devoid of any movement toward restructuring, as recommended by the KAIRI-SAP. For example, the SAP’s recommendation for the transfer of management control from the cabinet in year 1 and a repeal of the AIA Act in year 3 were not programmed. Instead, the activities were consistent with the revitalisation themes of previous years, which were aimed at making the AIA viable as a prerequisite to restructuring.

The AIIP strategy of increasing the acreage of arrowroot was partially successful. Farmers cultivated larger acreages in response to the production-incentive programme and the promise of better prices and mechanical harvesters to overcome the labour problem. Although acreages matched previous highs of the 1990s, it was only 54% of the 750 acres originally targeted by the AIIP. Even so, this strategy failed to provide increase the supply of rhizome to the factory, as the AIIP could not deliver on the promises of mechanical harvesters or better prices. Therefore, harvesting of cultivated fields plummeted even further as farmers recognised that they were unlikely to have made a profit at the current labour costs and the low rhizomes.

At the factory level, the AIIP increased the processing capacity of Owia factory and semi-automated the manufacturing process. However, there was increased cost of operation associated with these changes. For example, the use of 19 motors resulted in the additional electricity costs, while the forced-heated air technology incurred significant expensed due to the additional electricity and gas required. Additionally, the exclusion of the paddle washer as an ‘old’ piece of technology with eight women was inefficient and resulted in stones entering the grinding mechanisms, which eroded the expensive rasp blades at a rapid rate since. The high cost of operation was compounded by the MP’s desires to hire additional staff.

After the closure of the AIIP, the costs of operations were reduced through the reversion to air drying, and the removal of several motors from the process. However, some of these costs savings may have been due to the learning curve effects.

The strategic intent of the AIIP Manager and the proposed vision of the AIIA cause discomfort among stakeholders, including Government and farmers. Therefore, as time progressed, the Board lobbied the politicians to reduce the influence of the AIIP Manager (who was at the time also the AIA Manager). Furthermore, after the project period was ended, no further phases of the KAIRI-SAP were implemented. This was based in part on the indebtedness of the AIA, the uncertainty of the finances for implementing such change, the absence of a proposal from the AIA Board, and the unwillingness of the Government to privatise the AIA if farmers were not a part of it.

The AIIP was neither successful in creating changes from the inside, nor was it able to reverse the financial or market based fortunes of the AIA.

5.8.1.4 Introduction of New Enterprises

An imposed strategy on the AIA was the addition on the Cassava Factory and Mechanisation units. Interviewees identified political objectives and the need to have a 'parent organisation' for these new enterprises and the potential to add revenues to the AIA as major reasons for their incorporation into the AIA.

These enterprises, while complimentary to the AIA, added further costs. For example, the Government's policy of supporting through low cost tractor service that service was being operated below cost. Additionally, the Manager was further burdened by having to share time between the AIA's core activities with these additional responsibilities. The AIA with its scarce resources had to absorb the expenses of these undercapitalized projects.

The Board and management highlighted difficulty in selling the cassava product (farine), though some Government officials viewed this as evidence of management deficiencies.

5.8.1.5 Stimulating Production via Increased Rhizome Price

At the end of the 2007 crop, farmers were offered a 40% increase in rhizome price. Framers expressed cautious optimism and have adopted a wait and see attitude with this latest move. However, most were interviewees, including AIA and Government officials were of the view that this price should be increased further.

5.8.2 Operational Level Strategies

Several other attempts were used to overcome resource constraints through financing and collaboration

5.8.2.1 Short Term Financing

In the absence of long-term financing, the AIA pursued a number of short term financing strategies, including the operation of an overdraft facility, liquidation of its assets, debt-recovery, grant-financing by Government and inter-governmental organizations.

The Use of the overdraft facility was the reason for the AIA accumulating significant debt. The overdraft allowed the AIA to secure working capital, based on a projected cash inflow from starch sale. However, the income invariably would always be less than the value of the overdraft. The unpaid portion of this overdraft was accumulated as outstanding loans owing to Government by the AIA. To facilitate this, and in accordance with the AIA Act, the Government Mortgaged the AIA's property as security for these debts.

With a huge and growing debt, the AIA, through the Government engaged in a second significant short term financing strategy of disposing the AIA's property in Kingstown. At this point, the debt value was \$EC15M. At the point of sale, the AIA also required a possible EC\$15M to implement the KAIRI-SAP. However, the property was sold for EC\$11.5M, which was below the book value of EC\$12.5M, the board's asking price of \$15M and the potential value on the open market.

The low sale value was a result of the Government's influence and control over the process. Some interviewees were of the impression that the property could have been used as collateral for a loan. However, this may have been impossible, given that it was already mortgaged close to its full value, if not beyond this.

EC\$1M of the income from sale was, was allocated for a revolving loan scheme, however, this was subsequently transferred to the AIA and used. However, this in addition to a part of a fixed deposit were used as working capital for the AIA.

To achieve better cash flow in the 1980s, the AIA also attempted recover debt owed to it by producers and its marketing agent. This was not very successful, as some debts were uncollectible due to death and difficulty in identifying actual debtors. Furthermore, to collect debts with values greater than EC\$2000 required the AIA to pursue the matter in Court. This strategy was eventually abandoned due to the low benefit to cost.

5.8.2.2 Collaboration with Agencies & Government Departments

Where the AIA lacked skills and or knowledge, collaboration was sought out. Collaboration was used to secure the services of the food technologist at the Chinese Agricultural Technical Mission (CATM), ECGC to explore market possibilities in North America and the Caribbean. Key personnel in the Ministry of Agriculture were sought to address some problems. An example of this is the Cassava Task Force (CTF). However, even the proposal developed by the CTF was subject to many bureaucratic hurdles.

5.8.3 Supply Chain Governance Mechanisms

The AIA's mechanisms for adding value addition and reducing uncertainty, opportunism and through stakeholder participation were minimal and probably reflected the AIA's historical neglect of critical success factors.

The mechanisms for supply chain management were basic and focused upstream. The associated activities included the promotion of production and quality assurance and the coordination of harvesting activities through its General meetings and Extension service and did not include significant levels of joint problem solving or

planning. Furthermore, farmers have expressed significant mistrust of the Board and the AIA regarding their plans, especially with regard to offering a fair rhizome price. For example, farmers were of the perception that they bore most of the cost of production due to the AIA's practice of covering its costs before allocating rents to the producers upstream. This peeved farmers, and was made worse by the AIA's practice of offering the factory staff a bonus, while not providing a similar reward to producers.

Upstream, the supply strategy was based on the non-contractual relationship between the producers and AIA. The single desk seller structure provided a monopoly framework for avoiding high ex-ante costs associated with contracting, but did not safeguard against the ex-post costs associated with the decisions of producers to reduce their production volumes. Neither did it safeguard farmers from the AIA's decisions to allocate the rent from the sale of starch in a disproportionate manner. This strategy did not facilitate joint planning or problem solving, due to its top-down orientation.

The SDS structure allowed the AIA to retain greater percentages of the starch value avoid paying greater percentages of the value captured downstream. As a result, the rising cost of producing rhizomes upstream was not was not covered equitably upstream. Farmers were notably incensed about this practice and have expressed their dissatisfaction in very strong terms.

As a result, the direct transaction cost at this level was smaller than the real cost, although the AIA would have been incurring increased opportunity costs upstream and associated with the uncertainty of rhizome and starch supply.

Downstream, the AIA's transaction governance took the form of a quasi market arrangement. As a result it did not engage in and SCM activities - even when the Board and Management perceived that the AIA may have been receiving less than its fair share of the retail value of its products. Therefore, the Board and Management were unaware of the nature of the demand for its product. Furthermore, the limited cooperation information sharing and or joint problem solving in this dyad. For example, the AIA's attempted to gain market information from its main buyer did not meet much success. This information asymmetry impacted negatively on the price negotiation process.

Even when this researcher attempted to gain such information, it was met with a claim that it is “...*fairly sensitive business transactions...*” and the need to, “...*be approved by the AIA for us to disclose it*”. However, when questioned about pricing, it was stated, “...*that kind of information we don’t give out Colville*”. The AIA was therefore facing high levels of information and power asymmetry, and depended on the discretion of the buyer in setting a ‘fair price’.

Despite the information asymmetry, the Board and Management believed that the current buyer was trustworthy, given the longstanding relationship, his willingness to purchase starch at prices which were superior to those offered by competing buyers and the occasional advance of revenues in times of difficulty. However, the bounded-rationality of the Management and Board influenced their ability to negotiate better prices. Tacit support for this was noted in the interview with the buyer, who stated, “*We are always requesting that they give us some offers and wherever their offers have come in, we’ve been able to convince the final bakers, [that] that’s what their Government wants...they have agreed so far*”. It may be that the AIA was ‘shooting itself in the foot’ by negotiating based on wrong assumptions. Firstly, negotiations were based on the cost of production at the factory, rather than the full cost. Secondly, Board members expressed reservation about asking for higher prices since arrowroot starch was already priced significantly higher than that of other starches. However, given that arrowroot performs more like a premium product, a premium pricing strategy should have been pursued.

As discussed previously, price negotiation was characterised by information asymmetry. As such, it would have incurred transaction costs relating to the lost income opportunity. For example, while the St. Vincent arrowroot starch is highly valued, and hence attracts premium prices, the AIA has consistently received only a small portion of this value. Beyond the AIA, there is little evidence of value addition beyond repackaging. In one instance St. Vincent, arrowroot retails online for as much as US\$23/lb²⁷ (12% of the 2007 AIA’s starch price).

²⁷ Sourced from <http://www.frontiercoop.com/>

5.8.4 Extension Service

The primary mechanism for communicating with producer stakeholders was the Extension service. According to the Managers, the primary objectives of this service were; to promote production, provide production advice and support, to assist in the approval of credit and harvesting loans, and to coordinate the harvesting activities.

The extension Staff was untrained and relatively inexperienced, which limited their ability to carry out their functions successfully. However, their success was hugely influenced by the reduced credit facility and unsatisfactory rhizome prices offered by the AIA. As one member noted, “The Extension officers can only do so much, but it is left to the farmers to accept what was advised”.

The use of the Extension staff to validate the field status of farmers was successful in reducing deception in the application process. However, deceptive practices existed beyond the extension officer’s issuance of the reaping card.

5.8.5 Credit Administration

The system for credit repayment was weak and influenced by the culture of patronage and self-interest. On one level, it failed to detect deception, when farmers would sold the starch in the name of someone else, even when the reaping card was issued to the correct person. These producers and workers at the factory may have conspired to sell rhizome in the name of someone else other than the name on the reaping card. This practice facilitated the non-payment of debt, even among Directors. In one case a Director was repeatedly allowed to sell starch in another person’s name, after the board agreed that, “the AIA does not get into the business of farmers”²⁸.

Furthermore, the Board appeared to facilitate the retention of debt by the AIA. For example, if after a farmer sells his/her crop, it is recognised that his/her debt is greater than the revenue earned, then part of the debt is retained by the AIA in order for the farmer to receive some cash. One interviewee indicated that “*The [fees for being on*

²⁸ Minutes of Board Meeting

the] Board is not giving them the kind of financial reward they would get as against the crop. They would defend their crop. And they would not agree that you take this amount and that amount of money out every time, because they always find a way to say they don't get enough to pay their workers". One example of this was noted in 2004, when farmers were paid for crops, which were not harvested. Even where farmers were indebted to the AIA, the Board and Cabinet made a decision to debit only 50% of their accounts²⁹.

In another case, some Directors were noted to have engaged in the deceptive practise of selling rhizome in the name of another grower. This practice avoids the AIA deducting money owed to it.

5.9 Summary

The uncertainty in supply and Government action regarding sectoral policies and its treatment of the AIA legislation were the major external forces that influenced the AIA and its ability to perform.

Government's actions regarding the AIA Legislation were significant in that internal change to its ownership and governance structure and strategies depended wholly on the Government – neither the AGM nor the Board. On the policy side, the Government was also a significant source of influence on the AIA. Important direct policies were the policy to restructure the AIA and sell the AIA's property 2001 and the implementation of the AIIP in 2002. Indirect policies that were critical to the AIA were the Land reform policy, which made lands available to the farmers in the arrowroot growing zone in the early 1990s and the introduction of the National irrigation project to support banana production in 1998.

The major market variable of consequence upstream was the uncertainty in supply caused by a declining arrowroot rhizome production. The main reasons for this supply constraint were (1) difficulty in attracting labourers, who were otherwise

²⁹ 2003/2004 Compensation: Total Owed - \$151,860.876, Value of rhizome not harvested - \$156,975.00, Total paid - \$78,467.50, Total debt retained by AIA - \$75,930.43

attracted to more lucrative sectors, were often unwilling to harvest arrowroot field which may not provide them with an acceptable daily wage, (2) the relative attractiveness of the banana industry as an alternative to arrowroot production, and (3) the land reform policies of the Government.

Uncertainty in meeting demand downstream was another major factor influencing the AIA, as it increasingly could not meet its demands as the upstream supply shrank and became difficult to predict. However, the wholesale price for arrowroot starch was consistently lower than cost of production. This was caused by the information asymmetry and bounded rationality on the part of the managers and Board, and a subsequent inability to negotiate effectively capturing more of the value associated with the product downstream. For example, the Board was satisfied with the price of the arrowroot starch, when compared with the cost of production at the factory and with the price for cornstarch. This was so despite the despite the product's premium characteristics in the consumer market and the retail value of up to 85% accruing downstream.

The AIA faced a perverse chicken-and-egg dilemma; should it fix upstream uncertainty in order to realise greater profits downstream, thereby facilitating \greater rent re-distribution upstream? Alternatively, should it seek resolution to price downstream, in order to provide incentive and resources to fix the upstream problems? After all, in the words of Randolph Cato – then Financial Secretary, “*The Arrowroot Industry [Association] is presently grinding to a halt and faces self-destruction from major afflictions...*” (Cato, 1984, p. 1). The next section presents a synopsis of how the AIA responded to these issues.

The AIA has experienced low levels of performance over the last 20 years. With regards to production, it manufactured small and declining volumes of starch upstream. The SDS structure could not solve the problem of a shrinking producer base that was mistrusting of its ability to solve their problems – particularly delivering better prices, hence setting up a vicious cycle of decline.

Apart from declining production, the AIA's costs were high and increasing. The unit cost of production was increasing because of lower volume over which to spread

the manufacturing costs. However, overhead costs, low starch yield – due to field related problems and inefficient processing technology, excess staff and high energy costs all influenced this cost. Simultaneously, the wholesale price received for starch was lower than the cost of production, thereby creating negative net profits. Agency costs were incurred because of conflicts at the principal-principal level.

Another category – ex-post transaction costs, increased because of the inability of the SDS structure to safeguard against hold-up both upstream and downstream. To a large extent, the direct costs and indirect opportunity costs were influenced by the bounded rationality of the Managers and Board. The AIA's revenues were small and directly related to the low starch volume and a starch price, which was lower than the cost to produce it. In turn, this led to negative profits and created a perpetual financial dependence on the Government.

Despite the many studies and recommendations, including that in the KAIRI SAP, the AIA's Structure and competitive strategy remained unchanged due to an unchanging legislation and inadequate internal resources. This inertia may have also been aided by a Board and Management that were weak and characterized by a high level of bounded rationality and a bureaucratic strategic process.

The Strategic process remained anchored in Act 20 of 1976, which led it to become increasingly bureaucratic. The process is guided by the Strategic intent of the Government, and its desires to provide broad societal benefits not just to the AIA, but also to the Community and to assure some level of political support for the MPs in that arrowroot growing constituency. While Cabinet is legitimised in its functions, by way of the Act, these were heavily based on a mutual system of patronage where the politicians sought the support of the farmers for elections, and the farmers in turn sought board nominations, better prices etc. This facilitate the Government and Farmer's desire to keep the governance structure constant, even while seeking solutions to the AIA's problems.

The coordinating and safeguarding mechanisms were shaped by the AIA's structure and strategy. These were perceived to be ineffective in achieving desirable performance. Furthermore, they added costs eroded due to the patronage and self-

interest evident in the strategic process. One such strategy is that of escalating commitment among Government and Board, which led to significant indebtedness and a reduction of its resource base.

Based on the articulation among stakeholders, the AIA's strategy, structure was inefficient and could not improve performance in the absence of significant changes.

6 Discussion

“The real voyage of discovery consists not in seeking new landscapes but in having new eyes” Marcel Proust (1871 - 1922)

6.1 Introduction

This chapter presents a discussion of the case results in the context of the theoretical and empirical literature (Chapter 2). This analysis is also guided by the case context (Chapter 3), which is characterised by a small island economy where the banking sector is the main source of financing, and where there is an absence of a market for secondary financial services, management skills, and arrowroot-specific production technology. This discussion includes; (1) the reasons why the AIA’s structure and strategy are inappropriate, (2) The governance effects and implications of the inappropriate governance and strategy; including (i) Ineffective Property Rights, Social & Coordination Mechanisms, (i) The Inability to Control Transaction Cost and(iii) The Increasing Resource Dependency, (3) The AIIP as a significant attempt are breaking out the inertia (failed privatisation), (4) Performance induced decline, and (5) A review of the theoretical Framework based on the discussion, and

6.2 Inappropriate Strategy and Structure

The premise of strategic management is that the firm’s structure and strategy must fit or adjust to its environment as a prerequisite for achieving desirable performance. Hence, based on the definitions provided by Hofer, (1973), as cited by Chaffee, (1985), Farjoun (2002), Walker (1937), and Xu et al.(2006), the AIA failed to match its internal capability of producing a valuable and starch product with the opportunities and risks associated with selling it in the external environment.

The AIA, from inception, pursued a low cost competitive strategy (M.E. Porter, 1980), which attempted to resolve market failure faced by its members, by coordinating the processing and sale of bulk starch at the lowest possible cost. Contextually, (Armenakis & Bedeian, 1999) this strategy may have fit in the past, but failed to maintain alignment, as the AIA’s strategy failed to convolve with its environment (G.

J. Davis & Devinney, 1997; Mintzberg & Waters, 1985). As the cost of labour and other inputs increased, the arrowroot starch reached market at costs, which were above the downstream FOB starch price. Clearly, this ran counter to the rationale for a competitive-strategy choice as theorised by M.E. Porter, (1980; 1991, 2008). Based on the product characteristics, a better option may have been to pursue a differentiation or focussed differentiation strategy, in order to capture more of the starch value downstream.

The AIA's relational strategy was also unchanging and ineffective. Upstream, the AIA pursued a strategy which did not clearly fit the framework by Spekman et al.(1998). It combined elements of cooperation and coordination through a legislated monopoly. This strategy allowed for a horizontal coordination of planting, harvesting, and a vertical integration of the suppliers (rhizome producers), processors and seller (AIA). However, this strategy did not involve the level of information sharing and long term contracts as prescribed by this strategy. Downstream, the relational governance was through a market type arrangement. However, the more appropriate strategy may have been one of collaboration, to facilitate integration of supply chain and joint problem solving.

The AIA governance structure functioned as both internal and external governance mechanisms. Based on the theoretical arguments of Boehlje (1999), and O. E. Williamson (1991), the AIA may have been best served with a tighter vertical integration to secure greater controls over within its supply chain. The preferred option based on this would be two joint venture arrangements in the domestic market to replace the AIA, and downstream in the consumer market.

Despite its highly asset-specificity and transactions which were difficult to identify and measure, the AIA's downstream governance mechanism was a quasi-market arrangement, where it lacked sufficient controls over its transactions. As the AIA continued to produce less starch, it reduced the number of buyers to fit its supply capability. Consequently, while the level of coordination remained constant, the captive orientation facilitated a power asymmetry in favour of the buyer (Gereffi et al., 2005).

The AIA adopted a vertical ownership through a legislated monopoly arrangement, and acted as supply chain leader (captain) among captive suppliers. The AIA structure did not safeguard against ex-post transaction costs by farmers, who exited the industry, as profits were reduced at the farm level. In doing so, they inadvertently secured greater power asymmetry against the AIA, although this may not have reached the threshold for forcing the AIA provide better rhizome prices until 2008. As such, the structure was also ineffective upstream.

While respondents highlighted other contributing reasons, they pointed to the governance structure as the major cause for under-performance for the past 20 years.

Neither the changing environment nor strategy influenced a change in governance structure. This did not support the thesis of either Chandler (2003) nor Hall and Saias (1980). Instead, inertia was influenced by imposed political will (Hannan & Freeman, 1984; Mintzberg & Waters, 1985) and the effects of the legislation (J. G. Miller & Roth, 1994).

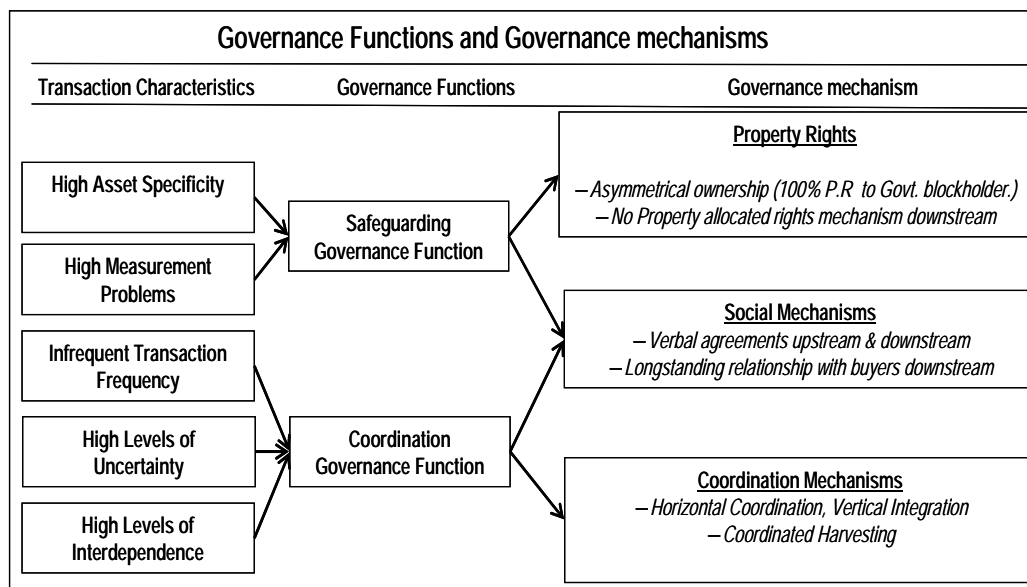
A fuller understanding of this governance structure-performance relationship can be distilled by examining the relationship with key contextual and moderating variables in the integrated theoretical framework. These relationships are discussed in the context of the governance theories.

6.3 Moderators of the Governance - Performance Relationship

6.3.1 Ineffective Property Rights, Social & Coordination Mechanisms

The major safeguarding and coordinating mechanisms (including property rights, social or coordinating mechanisms) used by the AIA to solve achieve firm efficiency in the AIA are presented in Figure 41 below.

Figure 41: Coordinating and Safeguarding Governance Mechanisms in the AIA



The redistribution of property rights via Act 20 of 1976 (AIA Act) was consistent with the strategy for motivating a blockholder to carry out the monitoring functions within the firm (Nilsson, 2001). However, this mechanism was inefficient.

Internally and facing upstream, the conferment of 100% property rights to the Government (proxy for the Public), may have created a legitimate and actively monitoring blockholder. However, this allocation created two additional governance problems. Firstly, it excluded AIA members from final decision making regarding the distribution of rents that affect them directly. This in turn created a follow-up as members viewed this as inconsequential. The second major problem was that unlike the prescription of theorists like Hart and Moore (1990), and in line with the observations of Nilsson (2001), and Ortamann and King (2007), this structure did not prevent ex-post opportunism (Nilsson, 2001; 2007). Specifically, in the absence of efficient follow-up, the Government exploited their ownership status to pursue societal objectives such as employment creation, and a general desire to ensure economic benefits to the “Carib community”. One example of this was the escalating commitment associated with the continued use of the overdraft facility, despite its debt building and value eroding actions. This behaviour was also mutually beneficial Board and Management, as they constantly searched for ways of financing operations.

Externally and facing downstream - where up to 84% of the value of the arrowroot starch accumulates - the AIA did not leverage PR (e.g. intellectual property rights agreements, branding or joint venture) to internalise and capture more of this value (Boehlje, 1999; Demsetz, 1988). Throughout the data-collection phase, no interviewee pointed to this as a viable solution for overcoming the perverse performance of the AIA. One reason for this was related to the poor business cognition and bounded rationality of the AIA Board and Management, who generally may not have had the mental models required to explore these alternatives.

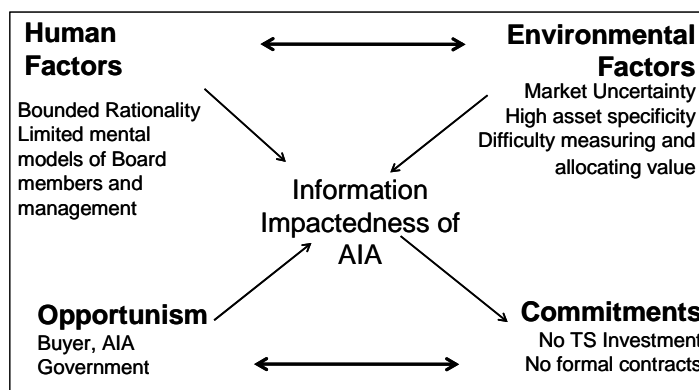
The AIA also used social mechanisms such as longstanding relationships; general meetings and the extension service to carry out both a safeguarding and coordinating function. The longstanding relationships with buyers were based on weak strategic partnership (Lu & Horng, 2007) and primarily aimed at information sharing about starch price and quantity. The general meeting and extensions services were also used to facilitate information sharing with suppliers (members and non-members). These mechanisms were fraught with mistrust and information asymmetry and hence did not facilitate joint planning or problem solving. For example, at the buyer level, despite repeated efforts, very little price information was shared with the AIA regarding the use and value of starch through to the consumer. In addition, producers mistrusted the ability of the AIA's Board and Management to deliver fair prices or solve perceived problems.

The AIA did not develop critical SCM competencies. Upstream, the primary coordinating mechanisms used by the AIA was the harvesting and planting system coordinated by the extension service. This system was considered to be increasingly effective recent years, though it is constrained by the restricted ability of AIA to provide credit. Downstream coordination occurred primarily through the longstanding relationship discussed above. the AIA board and management have expressed a lack of awareness regarding critical information on which to make informed decisions (Kaplinsky & Morris, 2001), and therefore unable to effectively negotiate fair prices and conditions for its products. The downstream buyer was benefiting from the bounded rationality of the AIA's decision makers (Amit & Schoemaker, 1993)

6.3.2 Inability to Control Transaction Cost

Using TCT assumptions, the AIA's hybrid structure - although vertically integrated - was not sufficiently tightly integrated to internalise and diminish inefficiencies or to achieve low or costless transactions Davis Devinney Rindfleisch and Heide (1997). As a result, the AIA suffered from high transaction costs emanating from human and environmental factors. Figure 42 illustrates how these variables interacted to create transaction costs in the AIA.

Figure 42: Model of Transaction Costs in the AIA



Firstly, upstream, the AIA structure did not extend to and therefore did not govern strategically important sources of transaction cost inefficiencies, such as the providers of labour and input. As these costs became more excessive, the structure was not adjusted to internalise them. Hence, the structure became progressively inefficient as a solution for reducing these costs.

Secondly, while the structure facilitated low ex-ante cost of safeguarding, contracting and coordinating through its monopoly arrangement, this mechanism represented an incomplete contract. The incompleteness related to the behaviourally uncertainty and adjustments of producers as they exited or withheld the harvesting and sale of arrowroot rhizomes to the AIA without penalty, thereby incurring TC related to opportunism and reducing economies of scale. The significant gap between production of arrowroot and the supply of rhizome between 2003 and 2005 was an example of this.

Although being a driver of transaction costs, exit, it was also a response to the failed TC mechanism, as characterised by information asymmetry, quasi-rents extracted

by the AIA, and a lack of incentive for motivating producers to expand their production base.

6.3.3 Inability to Control Agency Cost

As a nexus of contract as prescribed by Jensen and Meckling (1976), the AIA, was generally inadequate in resolving agency problems. This was because definitions of principal and agent in the AIA are nebulous. The AIA, like other SOEs is technically owned by the Citizens (the Principal). However, the Government was considered both Principal – being as proxy for Citizens - and Agents - given that their monitoring and control function on behalf of the Citizens. Ironically, the AIA Members who are a part of the Public - albeit a homogeneous category - and hence technically a principal, do not have property rights or final decision-making. Furthermore, the Board as constructed with representatives from these three categories was weak in creating sufficient ownership separation, given its rubber stamp status with the Government as final decision-makers.

Internally, members or ‘minor principals’ have tended shirk their monitoring roles, thereby weakening the ability of the SDS to minimise opportunism of the Board, Management and or the Government (as blockholders). This was compounded by the weakness of the General meeting as a mechanism for facilitating member’s participation in planning, and decision-making. These meetings were considered infrequent (biannual) and largely top-down. Furthermore, as the structure excluded a growing number of producers due to declining production, no adjustment was made to the structure to include them, although they were informed of decisions at special community meetings held by the AIA.

The Board of Directors was an inadequate mechanism for achieving ownership-control separation. In fact, the Government was perceived to act unilaterally to decide on prices and sale of property. The static configuration of the AIA Board (multi-constituent, separated leadership, low business cognition of a larger proportion of directors) as well as their limited involvement in strategy formulation was consistently associated with poor performance. Thought it is impossible for this study to predict relative contribution of each set of board characteristics.

On a positive note, there is an absence or lack of evidence of managerial agency via excessive perquisites (unfair financial gain). However, while one can conclude that, the salary of the GM was adequate in achieving principal-agent alignment; this was likely to have been a result of an almost total absence of free cash-flow.

Another failure of this nexus as contract related to the incompleteness of the ‘contract’ with suppliers. On one hand, the monopoly arrangement (with members) did not specify any conditions for the abrogation. As a result, the AIA was able to extract rents at will, while the farmer was able to decide whether to produce and or harvest, both without consequences. Furthermore, non-member producers (including ex-members) benefited in the same way as members. Had the final decision making reside at the Board level, many of these costs may have been reduced.

One observation, which was not fully investigated, is the fact that the ex-officio member, were also likely to be inter-locking directors, and may have influenced the strategic process in important ways. One such possibility is the influence of interlocking director from the Ministry of Finance on the sale of the AIA’s property.

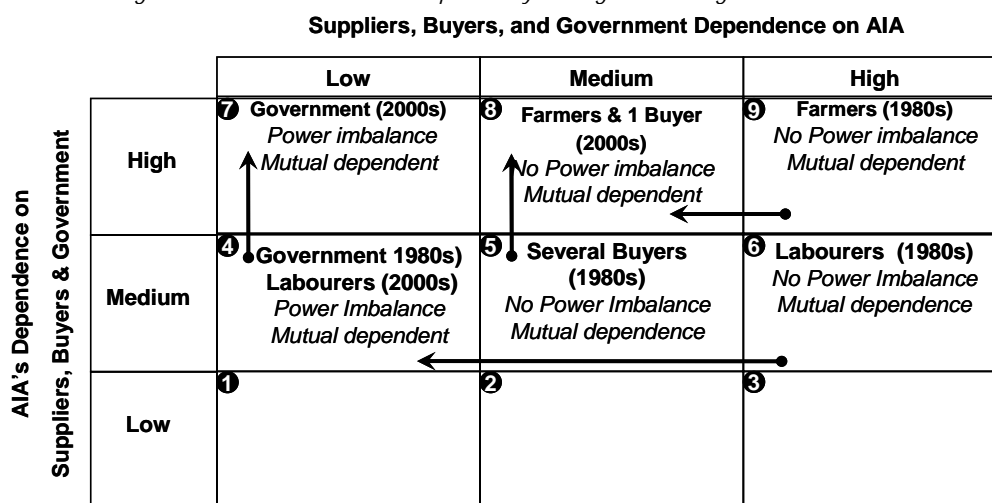
6.3.4 Increasing Resource Dependency

The SDS structure influenced performance in four significant ways. Firstly, the structure could not increase financial or market performance. Secondly and as a result of the first point, the AIA’s resource base was progressively being eroded. Thirdly, as members were not required to contribute equity, the only other source was from the Government – which was the sole owner. However, the contribution from Government was never enough to pursue meaningful industry rationalisation. Fourthly, the government, which owned 100% of property rights, did not restructure financial ownership through whole or partial privatisation, hence excluding the possibility of raising much needed equity from the private sector.

These factors conspired to increase the AIA’s dependency on the Government for financing, as much as the government was dependent on it to pursue political goals such as employment. This mutual dependence resulted in escalating commitment (Staw, 1976), as the Government and the Board collaborated to use the overdraft facility to

finance operations. As a result, the AIA grew increasingly indebted to and dependent on the Government over the years. The AIA was also becoming more dependent on other stakeholders. These relationships are illustrated in Figure 43 based on Casciaro and Piskorski (2005) framework). All major exchange partners gained power relative to the AIA. (Government moved from cell 4 to 7; buyers from cell 5 to 8; farmers from cell 9 to 8; and labourers from 6 to 7), and were able to exert power in their relationships with the AIA and were able to appropriate greater levels of benefits at the expense of the AIA.

Figure 43: Relative Resource Dependency among Transacting Parties



The AIA and Farmers were traditionally in a power-neutral and highly dependent relationship. However, as these farmers became dissatisfied with the AIA’s performance, they diversified into banana and other root crops. This allowed farmers to move from, a neutral power position to one with medium power. Conversely, the AIA was locked into this relationship.

6.4 The AIIP as Failed Rationalisation and Constraint Absorption

The attempt of the AIIP to privatise the cash flow of the AIA was not successful due to a lack of political will, resource constraint and poorly designed land lease contracts.

The AIIP did not include the recommendation by KAIRI SAP for handover of management from the cabinet in Year 2, and the restructuring of the AIA Act in year 3.

Instead, it attempted to achieve productivity gains through AIA through earlier tried strategies of revitalisation of the production base and factory refurbishment.

The decision not to proceed was consistent with the findings of Boubakri, Cosset, and Guedhami (2008), who noted the unwillingness of Government in developing countries to restructure. This was so despite the burden on the National economy. The major reasons for the hesitancy were (1) the absence of an equity market to facilitate private sale, (2) the AIA's debt burden, and (3) the risk shifting behaviour of the Government to avoid the negative impact associated with privatisation on employment. This latter action continued to be the stabilising force for inertia.

The AIIP attempt to absorb the constraint of supply upstream through mechanised harvesting, leasing of lands and hired labour was constrained by the AIA and AIIP's inability to raise needed capital to continue this strategy. Furthermore, the land lease was itself an incomplete contract and resulted in ex-post transaction costs, as producers refused to harvest planted field in response to perceived low profits.

6.5 Performance-Induced Decline

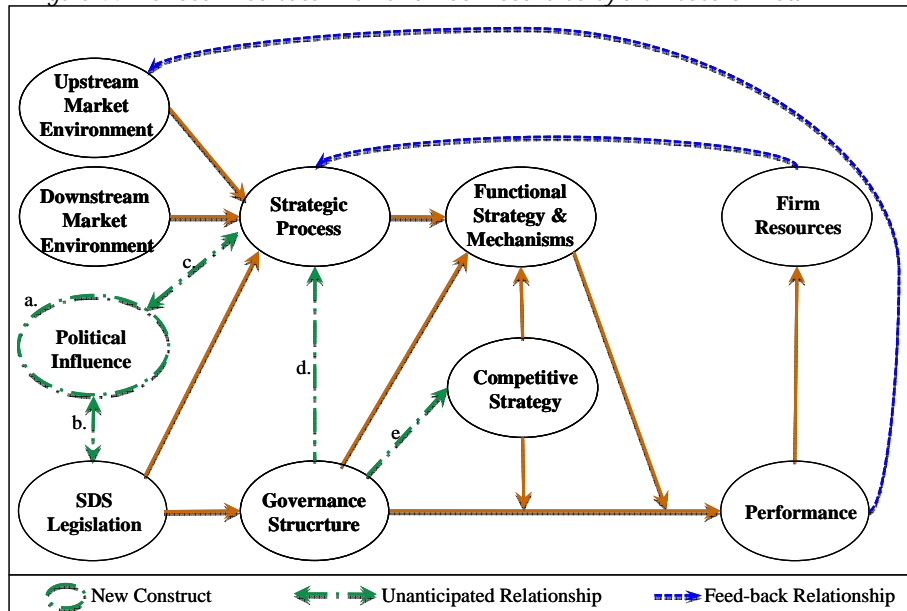
The poor financial performance led to the shrinking of the AIA's resource base and a consequent increase in resource dependency. This resulted in the AIA being unable to pursue possible alternative models of governance and strategy, although poor cognition models of the Board and Management may have significantly influenced this.

The poor performance and the extraction of rents by the AIA resulted in farmers being paid low prices, which were at or below cost of production. However, farmers often relate only to the cash flow and do not account for the cost of their labour. However, as the cost of labour and input increased, their gross profits declined. Consequently, farmers have been exiting arrowroot production, and those that remain have reduced the size of their production unit.

6.6 Revised theoretical Framework

In summary, the model (Figure 44) predicted the relationship between the governance structure and performance. However, there were important modifications of the a priori model as brought out by the data labelled as a-e.

Figure 44: Revised Theoretical Framework as Discovered by the Research Data



The effect of political influence (a) was not modelled, previously as significant variable. However, it appears to be the lynch pin in the inertia thesis. That is, the political will of the Government militated against any legislative change (b), which served to keep the AIA strategy and structure in inertia. The Government’s overwhelming influence in the strategic process (c) also acts as a damper to restrict internal efforts at restructuring.

The other changes (d and e) relate to the environment-strategy -governance dynamic. In the context of this SDS, the competitive strategy is not shaped by the environment because of a resource-starved bureaucratic process. In turn, it does not shape the governance structure.

If the AIA is to become efficient, it must address these critical relationships with urgency. That is, the influence of the politician must be eliminated forthwith. The cost of influence in the strategic process must become sufficiently to deter their current attitudes. One alternative is to pursue both economic AND control privatisation. Given

the absence of an equity market in St. Vincent, alternative forms of sales can be pursued, which facilitates investments. That is, a new-generation cooperative model.

This model solves a number of problems in the AIA. Firstly, the property-rights related problems could be solved by issuing transferable and redeemable shares to a re-established arrowroot cooperative on one hand and to other interested companies and individuals. Second the entity, should be formation of a jointly venture, owned by the producer cooperative, and the interested companies and or individual shareholders.

The relationship is not symmetrical. The changes in the environment influences the strategic process, however, this bureaucratic and resource starved process fails to influence the competitive strategy and the governance structure. They were not able to influence the politicians to make the legislative changes.

The political process is significant, though exogenous directly influences the strategic process. The will of the politicians directly influences the strategy. The unwillingness of the government is therefore represented in this process.

7 Conclusion Recommendations and Limitations

The art of medicine consists in amusing the patient while nature cures the disease. Voltaire

7.1 Conclusion

This study attempted to unravel the reason for the consistent poor performance experienced by the Arrowroot Industry Association (AIA) – a single desk seller (SDS). A holistic case study was used to study this phenomenon of interest. Multiple-perspectives from the strategic management discipline were used to guide the research in the interpretive paradigm. Data for this study were collected using in-depth interviews and secondary data sources (both qualitative and quantitative).

The overall conclusion of this study was that the unchanged governance structure was perceived by all categories of stakeholders to be the main cause of the AIA's negative performance over the past twenty (20) years. This SDS structure remained in inertia over the last twenty years. However, unlike the assumptions of the ecology perspective, this structural stability was associated continuously flagging performance. In fact, this stability was the Achilles heel of the AIA, since it became progressively more misaligned and inefficient in solving the various transaction-related problems.

Regardless of the theoretical lens or analytical framework used, the AIA was deemed to be was unresponsive to and did not co-evolve with its environment over the last (20) twenty years. As a result it increasingly became an inefficient mechanism for solving governance according to the normative and descriptive assumptions of property rights, transactions cost, agency, resource based view, resource dependency theories, stakeholder, and stewardship theories. Consequently, and despite having a rare and valuable starch product, the AIA was unable to meet demand or secure sufficient rents from the value chain to meet the revenue objectives of itself or of its members.

Externally, the SDS was neither an efficient contract nor nexus of contract, since it did not sufficiently vertically integrated to internalise the inefficiencies of transaction associated with the control the flow of product and value distribution. Furthermore, the

AIA did not bring all the important stakeholders or transacting parties to the table in a proactive way. Internally, the Board did not always recruit the best talents and was often limited by the business cognition of members. Furthermore, it was often used as rubberstamp to implement the wishes of the Government on whom it depended for financial bailouts. This mechanism was therefore, often a purveyor of agency costs, rather than adding to improved performance.

The most significant causes of inertia in the AIA's strategy and structure were caused by two exogenous variables (a fixed legislation and significant politically influence in the strategic process), and two endogenous variables (poor cognitive ability of management and directors and the limiting effects of its eroded resource base). The combination of poor performance and inertia of the AIA over the years resulted in various forms of escalating commitments, debt accumulation and a shrinking supply base upstream as producers sought alternative means of income. Furthermore, the absence of markets for managerial talents, corporate control and arrowroot production, harvesting and processing technologies restricted alternatives available to the AIA of Government in resolving the perceived problems.

In the absence of structural and competitive strategy change, the AIA attempted to overcome underperformance by several moves. One such move was the implementation of the AIIP. This project attempted to internalise the production inefficiencies upstream, but was only partially successful because the production incentives was enough to overcome the constraints between the AIA and farmer, but was insufficient to overcome the labour constraint further upstream.

This study contributes to the field of organisational studies in a small way to the body of knowledge within the community of organisation and strategic management researchers. Firstly, it examined the governance structure-performance relationship in the context of a state owned SDS that was experiencing pervasive poor performance. Secondly, it explored the phenomenon of interest in the context of the organic perspective and expands on organization-environment-strategy-performance model by Farjoun (2002). In particular, this study identified the critical debilitating role that the political process and the politician may play in the OESP model. Thirdly, this study added to the miniscule body of knowledge on strategic management in the Caribbean.

Therefore, it can be used as platform for expanding knowledge in this setting. This is very important in that firms in the Caribbean do not have many of the options for solving governance problems as in Anglo-American firms. Additionally, these SDS are likely to remain a feature in countries with very small supply base.

On a practical level, this has explored the reason for the performance deficiency and has pointed to an alternative model for solving the current problems. This is crucial especially within an industry where the current old cognitive business models implemented by decision makers have failed to achieve satisfactory performance.

The multiple perspectives applied to researching this phenomenon, as well as the rich context, provided rich examples of firm governance problems and alternative ways of examining them. Hence, this can be beneficial to educators and students.

From a personal perspective, despite having only scratched the surface I have gained tremendous knowledge and insights concerning governance, which spans significantly beyond this report. The deliberately broad approach allowed me to appreciate the interplay and complementary nature of the various governance theories.

7.2 Limitations

There were significant limitation relating to the types and quality of the data gathered during fieldwork. These mainly related to secondary data, but were also due to the non-availability of potential informants. There were significant gaps in the financial, sales, and factory operations records relating to the last 20 years. This problem was associated with inadequate human and physical resources and or expertise. For example, the AIA has been operating without the services of an accountant for a number of years. Electronic data were reportedly destroyed with computer failure. Some records were reported missing in transition when the office was transferred to Orange Hill. Further yet, the AIP records were could not be located. Where data were available through secondary sources, such as reports, there were clear inaccuracies. An example of this is the reported rhizome-starch recovery rate in the 1980s, which was more than the optimal limits.

While efforts were made to use the most accurate data available, the significant gaps and data quality concerns, may have compromised the analysis and conclusions in this study. Even so, my judgement is that availability of more accurate data would not have significantly altered the conclusions of the study.

Most farmers who were invited to participate in the interviews did not turn up. This was so even when the extension workers were used, to encourage greater participation. This reduced the potential variance in the interview data. But also speaks to the apathy that pervades this category of stakeholder.

The single case study or holistic method, while meeting the objectives of the study to solve the puzzle in this unique and extreme case, does not provide empirical generalisation, although some theoretical generalisation were made.

The time limits of this academic programme and specifically the time limit in the field placed limits to which the weaknesses in the data could have been addressed. The time constrains became more acute as several interviews and search for secondary data were delayed and or rescheduled due to no fault of this researcher. This slow progress further slowed the identification of potential informants who may have added further variability in interview data. Additionally, because of these delays, the initial analysis in the field was delayed and the feedback from to this summary was then limited to the Board and the CAO.

7.3 Recommendations

7.3.1 For Research

The prevalence and importance of the SDS governance structure in the Caribbean region makes it an ideal site to expand and test the revised theoretical model in totality, or by testing aspects of the model. These studies can add knowledge to the community of strategic management researchers of the governance-performance relationship in the contest of developing countries and in particular open and economically vulnerable Small Island States Developing States (SIDS). For example, one can study the effect of political oversight, and prior economic performance on post privatisation performance. Another line of studies can involve empirically testing and

modelling the testing path dependent relationship of the current (or improved) model (Venkatraman & Prescott, 1990; Xu et al., 2006). Yet another line of enquiry can test the relationship between knowledge and firm value, information and technology development on performance.

7.3.2 For the AIA, investors and decision makers

The major problems of the AIA as identified by the study were; (1) incorrect competitive strategy, (2) disproportionate allocation of property rights, (3) a follow-up problem among members, (4) a lack of transparency and independent oversight, (5) inability to raise much needed capital, (6) inability of the AIA to capture more of the value accruing to arrowroot starch, (7) overwhelming governmental control of the strategic & administrative processes, (8) a de-motivated and shrinking supply base and (9) poor business cognition among Management and Directors.

The proverbial chicken-and-egg scenario hounds the AIA. Should producers bear the cost of expanding the supply base in order to get the process going? The experience demonstrates that this will be grossly ineffective. The alternative, tried by the AIIP was to provide incentive to get this process going. However, if rhizome prices remain low, it is likely to suffer the same consequences of the AIIP. Furthermore, the AIA cannot sustain such a strategy with its weak resource base. Constraint absorption through the use by integrating backward is also likely to be ineffective, since many of these (e.g. labour and agrochemical prices) are beyond the ability of the AIA to resolve as a single entity.

I therefore recommend the following business model: The AIA must focus on increase income from starch sales while reduce costs. The best opportunity for achieving this is for the AIA to capture more the final value of the raw arrowroot starch is accruing in the export market (over 90% in some cases). This income will be redistributed upstream to motivate increased production. This in turn will bring benefit the AIA by lowering its cost of production as it achieves greater its economies of scale and scope. The subsequent steps are recommended to achieving success in the new structure..

8. The competitive strategy change proposed is for the AIA to abandon its low cost strategy for a differentiation or focussed differentiation.
9. The current AIA will be broken up to form two separate (2) entities to solve many of the above-mentioned governance problems.
10. One will through an investor-owner farmer's cooperative, which will maintain its vertical cooperation structure among producers. This will solve the property rights problems through appreciable, redeemable, and non-transferable shares. It will also seek greater profits by investing in the second body -AIA Company.
11. The AIA starch company will be a joint venture company, which may also be an equity seeking new generation cooperative. This firm will be part owned by the farmers' cooperative (~45%), private firms (about 3-4 holding ~ 45% shares) and Government holding not more than 10%. This will remove the control of government and significantly increase the cost of influence for Government to persuade these businesses to implement their objectives. An Additional safeguard against Government control would be the removal of legislated role in pricing of the company's product as currently happens with the Eastern Caribbean Group of Companies³⁰.
12. Create a second joint venture company downstream to act as the AIA Company's buyer-distributor in the most lucrative market. (Other similar entities may be created thereafter in other markets). This company will be a subsidiary of the AIA and other firms with core competence in distribution, starch ingredient research and or manufacturing. This company will manage a collaborative supply chain strategy, acting as industry captain. It will therefore solve the information asymmetry and trust problem associated with the current arrangement.
13. The changes from the old to the new model are depicted in

³⁰ A Local company engaged in the processing of rice, flour, animal feeds among other products and part owned by the Government of St. Vincent, P.H. Viera Company Ltd and Maple Leaf of Canada

14.

15. Figure 45 and Figure 46 below. The above approach was adopted by WIBDECO with much success, as it allowed farmers in St. Vincent and the Windward Islands to benefit from a re-distribution of wealth captured from WIBDECO UK, which engaged in the shipping, ripening and distribution banana ripening downstream.

Figure 45: Current AIA Governance Structure

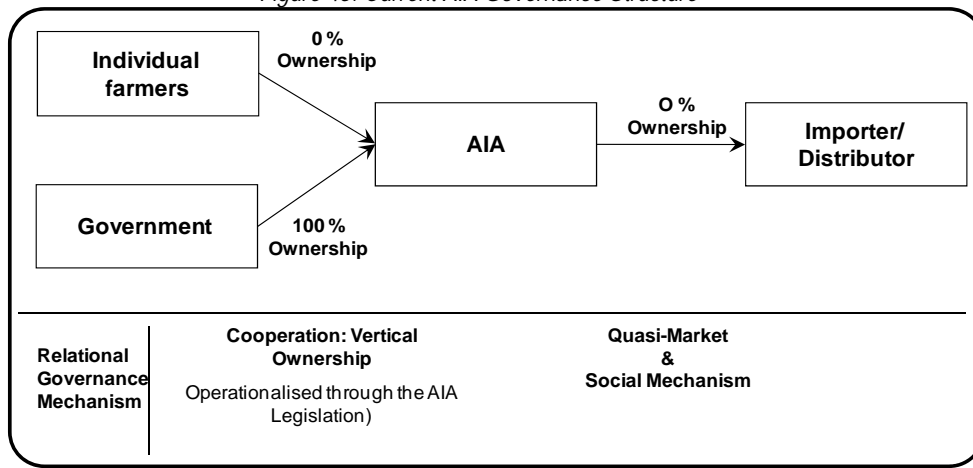
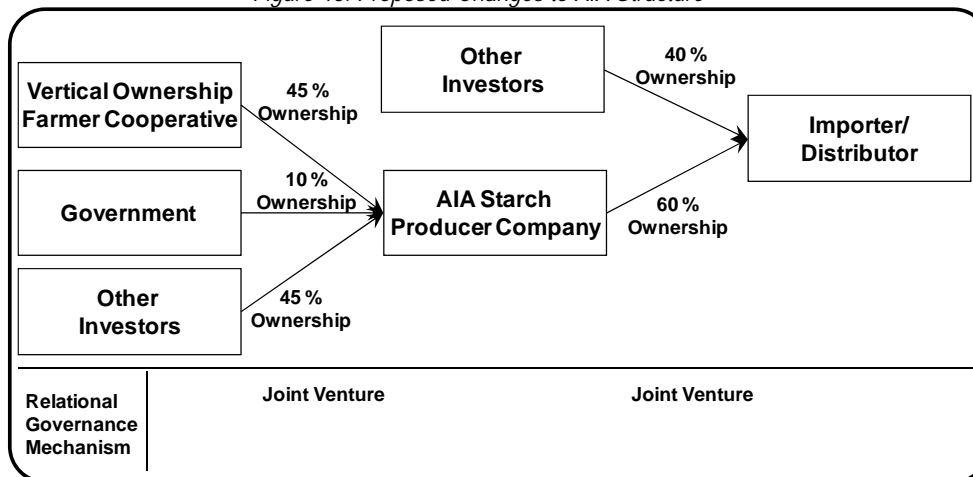


Figure 46: Proposed Changes to AIA Structure



16. To prevent further (new) agency and transaction costs problems between shareholders, proactive mechanisms such as an information system and a pricing formula must be instituted as part of the scheme. The information system would reduce information asymmetry and facilitate better decision making and build trust among stakeholders. This can be managed by the joint venture in the

upstream consumer market. To avoid hold-ups by any one stakeholder, the pricing formula must form part mechanisms governing the relationships between the joint ventures and the farmer's cooperative. However, it must be flexible and based on the principle of better capturing and redistribution of long-term value and of the chain as a unit, rather than each chain member maximising short term profits.

17. To secure against principal-investor agency, and to build confidence in the process, a legal remedy must be built into the privatisation process to protect potential investors against Government capitulating or stalling privatisation process.
18. The two joint venture companies must hire managers who are competent and skilled. However, board members must be selected to represent the major stakeholders
19. The major constraints to implementing the above recommendations are
20. Governmental support, including, making the legislative changes, and cancellation of the AIA's debt
21. Legislative changes to the cooperative act to facilitate new generation model cooperatives and the raising of equity on the regional stock exchange or via commercial loans
22. Financing the new cooperative and restructured AIA starch company would require an entrepreneurial approach. The specific form of the Joint venture can be based on a comprehensive business plan. However, the current assets should be allocated, such that the cooperative owns 45% and the Government 10%. The rest of the equity must come from additional injection of funds through a government bail-out and from the equity of new investors. It will be critical to attract investor with core competencies (critical success factors) in marketing and distribution and harvesting technologies, including biotechnology which can improve rhizome and starch yield and also facilitate year-round rather than

seasonal production. It is anticipated that the joint venture companies will cost only a fraction of the cost of the WIBDECO joint ventures.

The Significant difference between this Proposal and that by KAIRI SAP are (1) immediate relinquishing of 90% Government property rights ownership as opposed to 19-29 % in year one and the sale of 9-19 % to growers over an indefinite period. This is too long a period that facilitates governmental control, (2) establishment of a farmers' cooperative based on the homogeneity of this group. The cooperative should have a member-investor structure that offers redeemable non-transferable preference shares, (3) ownership of a joint venture company downstream to secure greater rents from the value chain, and (4) Control privatisation, that is removal of legislative and bureaucratic control mechanism of government.

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Appendix

Appendix 1: Recommendations from Previous Studies

<i>Industry Component</i>	<i>Recommendations</i>	<i>Implemented</i>	<i>Not Implemented</i>
Governance and Management	Include international banking or marketing expert on the AIA's Board		*
	Rationalise the Industry		*
	Develop a business plan		*
	Improve collection of production statistics		*
	Recruit a General Manager	*	
	Improve/increase staff commensurate with growth of the industry		*
	Develop a multi-disciplinary working group		*
	General Manager to assume marketing responsibilities		*
Marketing	Develop marketing strategy to increase market share		*
	Improve marketing arrangements for exports		*
	Review demand assessment for the product		*
	AIA to appoint reputable distributors to key Caribbean countries		*
	General Manager to conduct annual market assessment		*
	Market starch directly to manufacturing firms		*
	Foreign importers to reveal more about product's end uses		*
	Position the product as a health food input		*
	Forget Far East markets	*	
	Re-design arrowroot flour packages	*	
	Discontinue two-ounce size packs of arrowroot starch		*
	AIA to seek packers of spices and condiments to package arrowroot starch under their brand		*
	Undertake sales promotion		*
	AIA to produce point of sales material		*
	Seek technical and financial marketing support		*
Starch Processing	Conduct plant and engineering audit to improve efficiency		*
	Implement quality controls to improve starch quality, including lab & testing facilities		*
	Recruit a Plant Manager for Owia factory and other factories	*	
	Modify drying houses at Owia		*
	Conduct further work on the potential use of bittie as a potting medium		*
	Buy moisture meter and hire a technician to monitor starch water content at the factory		*
	Use coarse and fine bittie in animal feed formulations		*
	Develop centrifugal system for starch settlement process		*
	Automation of packaging procedure		*

<i>Industry Component</i>	<i>Recommendations</i>	<i>Implemented</i>	<i>Not Implemented</i>
	Developing a four-ounce pack for sale to tourists		*
	Periodic sampling of rhizomes to determine best harvesting time		*
	Pay an incentive for clean rhizomes		*
	Addition of centrifugal drying and solar drying systems at Owia plant to reduce drying time		*
	Investigate feasibility of new extraction and pulverisation/milling facilities		*
Field Production	Increase prices of rhizomes for farmers	*	
	Introduce improved cultural practices		*
	Introduce high yielding cultivars		*
	Increase acreage and output		*
Research & Development	Research on mechanisation	*	
	Research other varieties of cultivars		*
	Transmit research information and results across the Industry		*
	Consider the feasibility of mechanising production and harvesting		*
	Fund research of new uses for the product		*
	Continue data collection started by the French Mission		*
	Determine the true yield per acre of the Industry		*
	Improve extension services to arrowroot farmers		*
Financial Management	Write off of EC\$2 million loan to be taken as equity		*
	NCB forgive interest owing by the AIA		*
	Debt re-scheduling		*
	Sell Kingstown property		*
	Improve the collection of receivables		*
	A project be prepared for substantial investment in the Industry		*

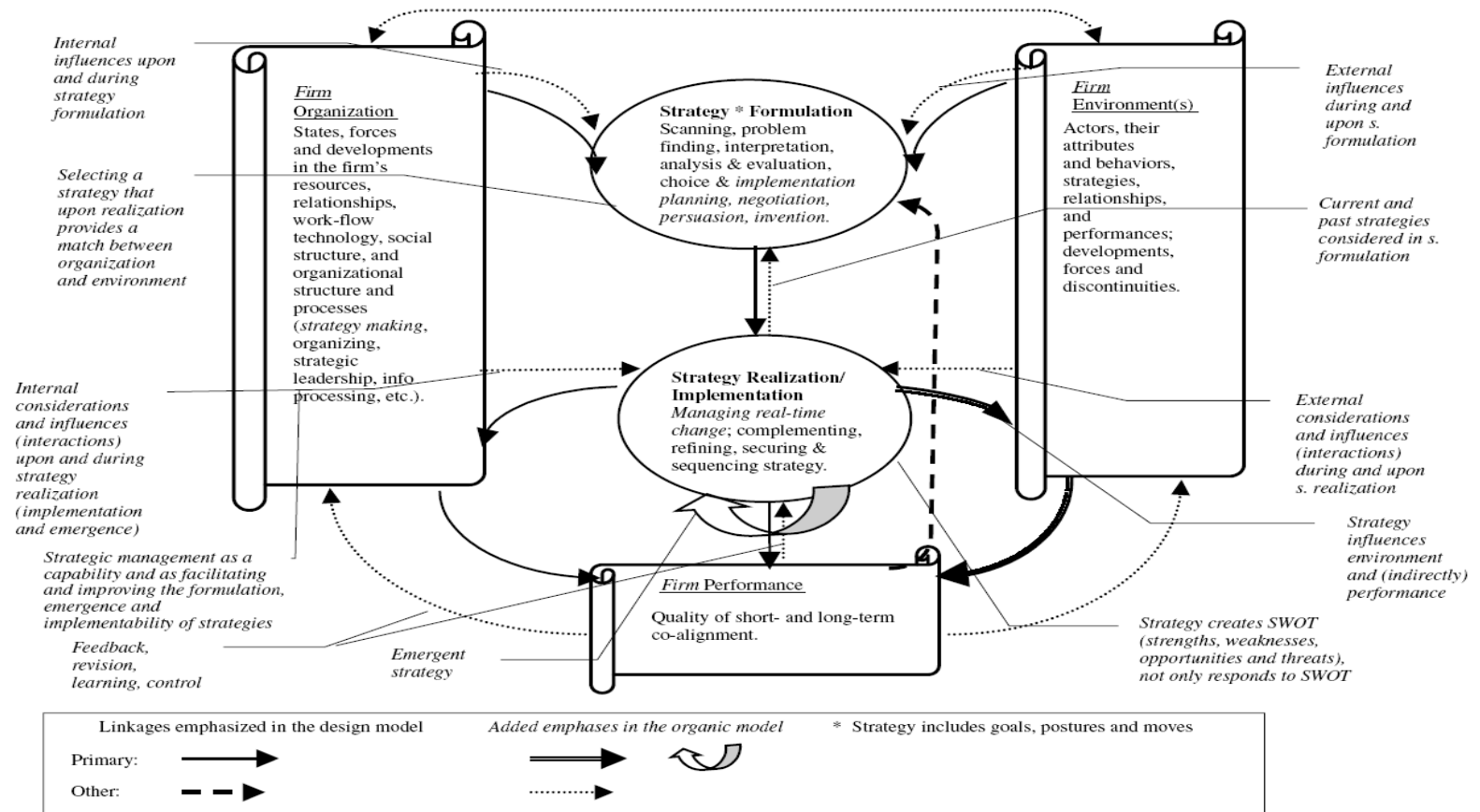
Source: (KAIRI, 2000, pp. 41-42)

Appendix 2: Priority Issues for Making the AIA Viable

Industry Component	Issues	
	Very high Priority	High Priority
Institutional	The Arrowroot Industry Act is cumbersome and limits the operation of the AIA and its Board The management of the Arrowroot Industry Association (AIA) is not empowered (lack of authority and resources) to manage and effect organisational change. No structured operational programme for integration of field production, starch processing and marketing to arrowroot products	No public management and financial reporting No standardised operational systems and procedures
Financial	Settlement of the AIA's accumulated debt of EC\$15.9 million. Severe working capital deficiency due to low gross margins and high overheads	Fate of the AIA's Kingstown property valued at EC\$13.7 million
Marketing	Fluctuations in arrowroot starch quality Increasing competition from suppliers of cheaper forms of arrowroot starch and other substitutes. High cost of St. Vincent arrowroot starch. No AIA marketing, merchandising strategy, product promotion or sales efforts.	Declining availability of St. Vincent arrowroot starch. No in-house marketing capability within the AIA. No product differentiation for various market segments
Starch processing & production	Poor quality control in starch extraction and pulverisation plants. Low and declining starch recovery levels.	
Field production	Declining rhizome and starch yield per acre Increased land use competition for housing and banana production.	No economic formula to determine price of harvested rhizome Inappropriate agronomic practices
Environment	Abandonment of soil conservation practices. No monitoring and testing of water used in starch processing	Concentration of arrowroot cultivation on environmentally sensitive areas. No occupational health and safety programme in place. Lack of an environmental and waste management programme for the industry Unregulated and untreated release of factory effluent.
Socio-Economic	Delayed and inadequate system of payment to farmers for harvested rhizomes	Delays in the supply of inputs
Research and development	Lack of long term strategic vision to drive research and development activity	Little research in marketing, product development and starch processing. Absence of a system for incorporation of useful crop research results into field production system.
Management	Lack of long term strategic vision to drive research and development activity	Little research in marketing, product development and processing. Absence of a system for incorporation of useful crop research results into field production system.

Source: (KAIRI, 2000, pp. 62-63)

Appendix 4: Organic Model of Strategic Management Process



Source (Farjoun, 2002, p. 573)

Appendix 5: Data Measures

Table 18: Data indicators and Sources For Measuring Constructs

Construct	Indicators	Source of Data	Tool to achieve analysis
Market Condition	Market structure (market uncertainty, Demand, Supply, Substitutes, Concentration, Buyers, Suppliers, raw material prices, technology etc)	Market/Industry reports, Annual reports Relevant Global Database (UN Commodity Trade Statistics Database) Buyers' Opinion, SDS production & Marketing records	(social, economic, technological) PEST analysis Porter's 5 Forces SWOT Analysis??
	Policy and Legislation	Legislation	
Strategy	Vision Strategy choice Strategy process	Vision/ Mission/ Statement Strategic Plan Minutes of Board and General Meetings	Porter's 3 Generic Strategy Model Interview Analysis Discourse analysis Case study Protocol
Firm & Governance Structure (safeguarding and coordinating mechanisms)	Ownership and Governance structure mechanisms	Industry Act SDS Rules Regulation	Interview Analysis Case study Protocol
	Board of Directors (Demographic, E. Scanning, S. Planning, Monitoring)	Letters of appointment. Board communication. Minutes of meetings Interviews with stakeholders.	Interview Analysis Discourse analysis Case study Protocol
	Stakeholder/ Network Management	Minutes of General Meetings Correspondence/records indicating of joint problem planning/solving Interviews with stakeholders	Interview Analysis Discourse analysis Case study Protocol Stakeholder
	Quality Control	Legislation, SDS Rules Interview with stakeholders Grades & Standards	Interview Analysis Discourse analysis Case study Protocol
Performance (economic, financial & market)	Agency Cost	Formal Contracts & Agreements, Letters of appointment to board and staff, Financial Statements, Interviews with stakeholders Production records (volume, input price, cost asset value, turn over etc, Sales volume and revenue	Financial Ratio Analysis Market Share Market Power Asymmetry Value Chain Analysis Interview Analysis Discourse analysis Case study Protocol Value Chain Analysis?? PEST analysis
	Transaction Cost		
	Production costs		
	Factory Productivity		
	Economies of Scale		
	Revenue		
	Supply Chain management	Contracts, Rules, Regulations Interviews with Management , Supplier and buyers, Farmers' records, Reports SDS Accounting Records	
	Value re-distribution		
Raw Supply and materials Price			
Stakeholder satisfaction	Interviews with stakeholders Letters/documents indications satisfaction Order/sales records, Minutes of meetings		
Firm Resource Characteristics	Resource Dependency	Financial records (member equity contribution, grants, loans, financial and physical assets)	Interview Analysis Discourse analysis Case study Protocol
	Resource Base		

Appendix 6: Expected Patterns of Findings

Table 19: Expected Patterns

SVAIA Structure (Actual/ perceived change in response to powerful stakeholder/ blockholder ,legislation, other market conditions)	Significant influence from blockholder, Legislation Insignificant influence from strategy/ strategic process Insignificant influence on structure/Inertia
SVAIA Strategic process (Actual/ perceived change in process change in response to powerful stakeholder/ blockholder ,legislation, other market conditions)	Significant influence from blockholder/ legislation Insignificant influence from other market conditions Insignificant influence on strategic choice/Inertia
SVAIA Strategic Choice (Actual/ perceived change in response to powerful stakeholder/ blockholder ,legislation, other market conditions)	Significant influence from blockholder/ Legislation Insignificant influence from other market conditions Insignificant influence on structure/Inertia
Market Conditions (Actual/ perceived change in supply and demand side market conditions)	Inflexible legislation represents the greatest threat to internal firm performance.
Agency costs (Perceived & actual change in costs of monitoring, safeguards ex-ante failure to control opportunism of agents, staff, block holders, or transacting partners)	Increased Agency costs
Transaction costs (Perceived & actual change in ex-ante and ex-post transaction costs associated with asset specificity, measurement problems, transaction frequency, uncertainty, and interdependence)	Increased Transaction costs
Production (operational) costs (Perceived & actual change in cost of production at the factory levels)	Increased production costs
Gross Revenues & margins (Perceived & actual change in income & profit)	Decreased revenue & profit margins
Economies of scale (Perceived & actual change in asset turn-over, return on Asset)	Declining Economies of Scale
Actual Market share (change in mkt. Share %)	Declining Market Share
Perceived Market power	Declining Market Power
Perceived Ability price discriminate (change in SVAIA Commodity Price)	Declining ability
SVAIA performance (supply side) (actual or perceived change in production)	Reduced production of arrowroot on-farm and a consequent reduction of processed arrowroot and starch
Blockholder/stakeholder opportunism (actual or perceived influence of influential blockholder in dictating terms and conditions of)	

Appendix 7: Case Study Information Sheet

"Change, governance inertia & performance in a micro-sized single desk seller"

INFORMATION SHEET

Introduction

Researcher Name

Colville King (Masters of management Student)

Type of Research

This research project is being completed in partial fulfilment of the degree of Masters of Management with endorsement in Agribusiness

Purpose of the Study

From a theoretical stand point, this study will seek to generate knowledge relating to the market condition-strategy-structure alignment and its impact on the performance of the St. Vincent Arrowroot Industry Association (a Single Desk Seller of processed arrowroot starch). Specifically, it seeks to examine the effects of the governance structure on firm performance in the context of unchanging industry legislation. On a practical level, this study will provide valuable knowledge and insights for stakeholders of single desk sellers, especially government policy makers, farmers and financiers on which informed decisions can be made regarding context, structure and performance.

Supervisors

Nicola Shadbolt (Associate Professor) Ralph Stablein (Professor)

Participants (Interviewees)

For the interviews, interviewees would be the Manager(s), Board members, and key decision makers and stakeholders who may influence the functioning of the St. Vincent Arrowroot Industry Association (SVAIA). These individuals would be identified by examining the records of the SVAIA. Farmer will be randomly selected from a membership list.

PROJECT PROCEDURES

Use of Data

The data generated will be used strictly for the thesis and subsequent publication. The data will therefore not be used for other purposes

Storage and disposal of data

Data from interviews will be stored on electronic format in a password protected file. The computer on which this will be stored will also be password protected. This data will be retained by the supervisors for referencing/verification purposes over a period of 5 years.

Data will be collected through searches primary and secondary sources, including official SVAIA documents (Minutes, reports, communication), and other relevant industry studies and reports. Where possible, copies of these relevant documents will be collected.

Voice recording will be used to collect data through interviews using semi-structures interviews.

Method for accessing a summary of the project findings

An oral presentation of the summary findings will be conducted with participants to aid in increasing validity. A final summary of the findings will be provided to the participants by the researcher at the conclusion of the study.

Method for preserving confidentiality of identity

The researcher will be the only person collecting and analyzing the data. Therefore, there will be no confidentiality agreements signed

Participant involvement

The participants will be involved in interviews.

PARTICIPANT'S RIGHTS

You are under no obligation to accept this invitation. If you decide to participate, you have the right to:

- decline to answer any particular question;
- withdraw from the study (specify timeframe);
- ask any questions about the study at any time during participation;
- provide information on the understanding that your name will not be used unless you give permission to the researcher;
- be given access to a summary of the project findings when it is concluded.
- ask for the audio tape to be turned off at any time during the interview.

PROJECT CONTACTS

If you have any concerns or questions about this research, please feel free to contact any of the following supervisors.

Nicola Shadbolt
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College of Sciences
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Palmerston North
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LOW RISK NOTIFICATIONS

This project has been evaluated by peer review and judged to be low risk. Consequently, it has not been reviewed by one of the University's Human Ethics Committees. The researcher(s) named above are responsible for the ethical conduct of this research.

If you have any concerns about the conduct of this research that you wish to raise with someone other than the researcher(s), please contact Professor Sylvia Rumball, Assistant to the Vice-Chancellor (Ethics & Equity), telephone 06 350 5249, email humanethics@massey.ac.nz.

Case Study Overview

Appendix 8: Case Study Protocol

"Change, governance inertia & performance in a micro-sized single desk seller"

CASE STUDY PROTOCOL

Case Study Overview

I. Project Objectives

This research study will be carried out under the auspices of the Massey University Colleges of Business and Science as partial fulfilment for a Masters of Management degree.

The main purpose of this study is to explore how the governance and organisational structures of the St. Vincent Arrowroot Industry Association may affect performance of a Single Desk Seller from the perspective of its principals and stakeholders.

The research will be conducted using a case study design and the multiple perspectives of resource base, transaction costs and agency theories. The main research paradigm which will guide this puzzle-solving is the interpretivist paradigm. Knowledge gained from this study will add to the community of researchers as well as assist agribusiness managers to propose and implement better strategies for guarantee improved performance, or, at least to avoid.

II. Relevant readings

a. Key Readings

1. Fitter, R. and R. Kaplinsky (2001). "Who gains from product rents as the coffee market becomes more differentiated? A value-chain analysis." *Ids Bulletin-Institute of Development Studies* 32(3): 69-+.
2. Gillespie, J., K. Seon-Ae, et al. (2007). "Why don't producers adopt best management practices? An analysis of the beef cattle industry." *Agricultural Economics* 36(1): 89-102.
3. Karlson, D. (2005). *Organizational models in U.S. agricultural Cooperatives*. Department of Economics. Uppsala, Sweden, Swedish University of Agricultural Sciences: 72.
4. Ohlsson, C. (2004). *New Zealand dairy co-operatives – Strategies, structures, and deregulation*. Department of Economics. Uppsala, Sweden, Swedish University of Agricultural Sciences: 45.
5. Toms, S. and I. Filatotchev (2004). "Corporate governance, business strategy, and the dynamics of networks: A theoretical model and application to the British cotton industry, 1830-1980." *Organization Studies* 25(4): 629-651.

III. Field Procedures and estimated time frame for each

a. Presentation of credentials & gaining access

A letter of approving the conduct of the studies will be issued by Massey University to the key informants. It will also request permissions to conduct interviews and gather other relevant data from identified sources. An initial meeting will be held with the Manager and Chairman of the Board on July 31st to finalise details of appointments.

b. Develop case database

The database will include case study notes of field observations and analysis, case study documents (documentation, interviews and transcripts, archival records etc)

c. Data collection activities & Schedule

- i. – Collection of secondary data (*reports and other secondary documentations*)

4th August

Minutes of Board, general and special Meetings

-	Official Correspondence
9th	Accounting and marketing records (including annual reports)
September	Strategic Plans
	Other Secondary data sources
ii. Data collection activities	
11 th - 27 th	Interviews with stakeholders
August	Field observation of production/harvest activities, processing & marketing operations
IV. Interview questions	
The questions to be used are open-ended and semi-structured. Appropriate language will be used in each interview. Questions are as follows:	
<ol style="list-style-type: none"> 1. Is there a relationship between the (unchanging) governance structure of the industry and its economic, financial or market performance? 2. Has the Board of Directors as a major governance mechanism been able to significantly influence the performance of the SVAIA? 3. Are there alternative confounding explanations for the relationship identified? (e.g. stewardship and paradox theory) 4. What are the exogenous factors most influencing the SVAIA internal business model? 5. Has the firm's strategic process, strategic choice and structure been influenced by; the SVAIA's declining performance (decreasing resource base); influential blockholder /stakeholders, legislation? 6. How effectively has the strategic process of the SVAIA influenced the identification of opportunity, the choice of strategy and structure, and the performance of the Board of Directors? What are some of the impediments to implementing a more effective strategic process? 7. Have the decline in production significantly influenced the decision of members to reduce the production of arrowroot on farm? 8. Is a stakeholder able to influence the direction of rationalisation due to its influence on external resources? If so, has that blockholder acted opportunistically and what are the consequences? 9. Have blockholders acted opportunistically in the 	
1. Interview schedule	
Initial request for Interviews and observation will be done by Massey University to the administrative office of the Arrowroot Industry Association. A tape recorder and adequate battery and cassettes, stationery will be used for recording and transcribing interview data in order to maintain control over data quality. This interviewer within the timeframe for data collection will finalised in the meeting with the Manager on 31 st July 2007. The proposed schedule is as follows:	
Monday 11th August	
Interview with Permanent Secretary	PS-Agric Office, Kingstown
Interview with Minister of Agric	Minister's Office, Kingstown
Interview with Chief Agricultural Officer	CAO's Office, Kingstown
Wednesday 13th August	
Interviews with Board (Elected Reps.)	SVAIA Conference Room ,
Interviews with Entire Board	SVAIA Conference Room
Interviews with Staff	SVAIA Conference Room
Interviews with Selected Farmers	SVAIA Conference Room
Interviews with Selected Farmers (Non-members)	SVAIA Conference Room

Wednesday 14th August		
Interviews with Local Buyer1	SVAIA Conference Room	8:30 a.m. - 9:30 a.m.
Interviews with Local Buyer2	SVAIA Conference Room	9:30 a.m. - 10:30 a.m.
Interviews with Local Buyer3	SVAIA Conference Room	10:30 a.m.- 10:30 a.m.
Telephone Interviews with Regional Buyer 1	SVAIA Conference Room	11:30 a.m.-12:30 p.m.
Telephone Interviews with Regional Buyer 2	SVAIA Conference Room	12:30 p.m. -1:30 p.m.
Telephone Interviews with Regional Buyer 3	SVAIA Conference Room	1:30 p.m. - 2:30 p.m.
Telephone Interviews with International Buyer 1	SVAIA Conference Room	2:30 p.m. - 3:30 p.m.
Telephone Interviews with International Buyer 2	SVAIA Conference Room	3:30 p.m. - 4:30 p.m.
Telephone Interviews with International Buyer 3	SVAIA Conference Room	4:30 p.m. - 5:30 p.m.
Wednesday 13th August		
Interviews With Other Relevant Persons	SVAIA Conference Room	8:30 a.m. - 4:30 p.m.
Meeting With Minister of Agriculture, PS-ministry of Agriculture, Chief Agricultural Officer To Discuss Draft Findings & Analysis	MOA Conference Room	11:30 a.m. - 1:30 p.m.
Meeting With Staff & Manager To Discuss Draft Findings & Analysis	SVAIA Conference Room	1:30 p.m. - 3:30 p.m.
Meeting With Farmers To Discuss Draft Findings & Analysis	SVAIA Conference Room	3:30 p.m. - 4:30 p.m.
<p>a. Draft findings 19th – 27th August &</p> <p>b. Review of findings by informants 28th August</p> <p>c. Revise and complete report 1st September onward</p> <p style="padding-left: 40px;">- Massey University supervisors will be updated on a weekly basis of progress and feedback sought on problem areas.</p>		

Appendix 9: Semi-Structured Questionnaire Guide

Overall question:

23. Does the SVAIA governance structure (Single desk seller structure) lead to acceptable/unacceptable performance? How?
24. Are there other factors - apart from governance- that influences the organisational performance?

Possible guiding questions

- i. What are some of the successes that the SVAIA aims to achieve; how has the SVAIA structure (single desk seller coordinating horizontally across farmers and vertically integrating production, processing & marketing) facilitated satisfactory performance over the years? (economies of scale costs, revenues, market share, and market power, arrowroot starch & rhizome price etc)
- ii. What evidence exists to prove this?

Overall question:

25. What were the main factors/issues preventing the SVAIA from meeting its stated goals and objectives?

Possible guiding questions

- i. How has the SVAIA operation and structure (safeguarding and coordination mechanisms and strategies) enhanced or diminished the ability of the SDS governance structure to achieve targeted performance? How?
- ii. How do specific mechanisms or other external factors affect its performance?
- iii. What are the key market drivers leading to threats and opportunities for the SVAIA
- iv. What strategic process has been used to identify above? Has the process led to modification of the strategy/structure to suit the above changes in market drivers? Has this process been efficient?
- v. What are the operational strategies and coordination/safeguarding mechanisms that the SVAIA employ and how do they improve/reduce the effectiveness of the SDS governance structure to perform (diminish costs, revenues, market share, and market power, arrowroot starch & rhizome price etc)?
- vi. Are stakeholders/blockholders (government/govt reps, members/elected reps, management/staff, buyers etc) equally able to influence the process or choice of strategy, structure, operational strategies and mechanisms?

- vii. Is the choice of process/strategy/structure influenced by the SVAIA's financial performance? Explain.
- viii. Is the composition of the board ideal? Does it facilitate the best representatives to be selected/ elected? explain
- ix. How does the SVAIA finance its capital projects? Does the financial/economic performance of the SVAIA influence the choice of internal /external equity?
- x. Are board members influential in accessing/raising external financing? If so who? And how is this achieved?

Overall question:

26. How does the performance affect the choice of governance structure?

Possible guiding questions

- i. Has the market, economic or financial performance (identified in 1 above) influenced the decision of members/non-member producers to change their levels of production of arrowroot at the farm level?
- ii. Are there other non-performance related factors influencing the on-farm production? Rival Explanation
- iii. Are the various categories of stakeholders equally able to influence the direction of rationalisation to improve performance? If no, why?

Appendix 10: Consent Form

**“Change, governance inertia & performance in a micro-sized
single desk seller”**

PARTICIPANT CONSENT FORM

This consent form will be held for a period of five (5) years

I have read the Information Sheet and have had the details of the study explained to me. My questions have been answered to my satisfaction, and I understand that I may ask further questions at any time.

I agree/~~do not agree~~ to the interview being audio taped.

I ~~wish~~/do not wish to have my tapes returned to me.

I wish/~~do not wish~~ to have data placed in an official archive.

I agree to not disclose anything discussed in the Focus Group

I agree to participate in this study under the conditions set out in the Information Sheet.

Signature:



Date:

11.08.08

Full Name - printed

ALLAN H. M. ALEXANDER

Appendix 11: Example of Interview Script – Story Building

Private & Confidential: Interview with Mr. Markley Gill – Former Manager ALA ①

Governance, Inertia and Performance

00:00:21	<p>Interviewer Questions</p> <p>Ok Mr. Gill, thank you for agreeing to this interview and to start out, I'd like you to give me your impression as to what were the <u>opportunities</u> that were facing the Arrowroot Industry Association. What...was the case for selling arrowroot, what were the opportunities there...for marketing arrowroot. And at the same time what were some of the threats out there that might have prevent us from doing just that?</p>
00:00:57	<p>Interviewee response</p> <p>...It's a pleasure doing an interview with you again and wish you all the best...your endeavour on what you are trying to pursue here. You asked about opportunity for arrowroot. The arrowroot industry produce[s] a product. A very unique product this is starch. And it has <u>tremendous potential, for marketability, locally, regionally and internationally.</u> As you would realise and know you have done the research into the unique qualities of arrowroot starch, I won't even bother going into these, because you know the uniqueness in terms of the nature of the starch, the granules, the <u>palatability, its digestability.</u> Its uniqueness it terms of all these things that lend itself to a kind of market that is a <u>speciality market in food related.</u> So that is the opportunity. And because of that we were <u>able to get higher and higher prices</u> without doing much work. The prices would have risen between 2000 and 2008 almost 100% just by...the demand that the product would have created. Not by we doing any marketing. Not by we exploring different markets. <u>[but] by the same buyers who were prepared to pay more for htis product, because of the demand.</u> So that is the potential that is the opportunities there.</p> <p>Now in terms of threats, [they are] <u>tremendous.</u> The Arrowroot [Industry Association] I would say <u>encumbered</u> in 2003/2004 by a number of things. It took on more greater. Its mandate was expanded, not to only deal with producing arrowroot starch and selling arrowroot starch. They got into <u>tractor service</u> it got into <u>cassava processing.</u> And these things <u>and</u> the service would appear [as though] Its expanding its reach in terms of enterprises and so on, but they were <u>encumbrances</u> more than anything else. Because these were new ventures in which the Arrowroot Industry [Association] <u>did not have experience in;</u> did not have the <u>internal capacity;</u> did not have the <u>funding</u> to deal with and really carry out in a serious way. And <u>they pulled the industry down</u> rather than...sustain or even pushed it up. It actually encumbered...it kinda kept it down.</p> <p>That's basically it. The opportunities in terms of the product, the unique product – which is arrowroot starch and the threats and <u>missed opportunities</u> because of additional responsibilities and mandates that the industry really couldn't handle at that time.</p>
00:04:01	<p>Interviewer Questions</p> <p>The mandate related to tractor and cassava?</p>
00:04:02	<p>Interviewee response</p> <p>Other stuff that they got into. They moved away from just producing arrowroot starch and selling arrowroot starch...that was the [original] business of the arrowroot industry [to] buy rhizomes from farmers, produce starch and sell it. That is it.</p>
00:04:18	<p>Interviewer Questions</p> <p>You say that these things were added, added by whom.</p> <p>Interviewee response</p>

Private & Confidential: Interview with Mr. Markley Gill – Former Manager AIA

Governance, Inertia and Performance

<p>00:04:24</p> <p><i>Process initiated by minister & board officials.</i></p>	<p>The <u>authorities in the Ministry of Agriculture</u>. Maybe...naturally it's spearheaded by the Minister of Agriculture, then the Chief Agricultural Officer and [other] persons in that hierarchy would have seen it fit in their discussions, in their deliberations, to add these things to the Arrowroot industry [Association]. I must say also that <u>the Board of the Arrowroot industry [Association] should have had a say</u> in the decisions to allow the AIA to take on these things.</p> <p><i>Non involvement of Road.</i></p>
<p>00:04:55</p>	<p><u>Interviewer Questions</u> Were you Manager when these things were added?</p>
<p>00:04:58</p>	<p><u>Interviewee response</u> No</p>
<p>00:05:00</p>	<p><u>Interviewer Questions</u> They were added before?</p>
<p>00:05:01</p> <p><i>Details of when events occurred.</i></p>	<p><u>Interviewee response</u> They were. I came...just on the outset. The <u>Cassava part started before I came here</u>. The tractor service part started before I came. <u>What I did I completed the cassava part of it</u> [building phase] and I initiated the processing aspect of it, and I tried to regularities the tractor service and I tried to beef it up in terms of getting additional equipment, in terms of some aspects of training and in terms of deployment of tractor.</p> <p><i>Start to make a profit.</i></p>
<p>00:05:38</p>	<p><u>Interviewer Questions</u> What about substitutes. What kind of threats did substitutes and competitors play? What else...things that are outside the powers or the responsibility of the Arrowroot industry, but which could have impacted?</p>
<p>00:06:04</p> <p><i>Lack of tech. know-how</i></p> <p><i>Consequence lack of tech. know-how</i></p>	<p><u>Interviewee response</u> I would say <u>capacity</u>. <u>Internal capacity, in terms of technology that we did not have and up to not we are trying to attain</u>. We do not know. <u>We do not know certain things that we should know to respond to what...we were involved in businesses that we were not too au-fait with and to deal with these things we needed more know how</u>. And know-how comes at a cost, and <u>we did not have that money to pay for that know-how</u>.</p>
<p>00:06:39</p>	<p><u>Interviewer Questions</u> Know-how in relation to [what]?</p>
<p>00:06:40</p> <p><i>Explanation of the lack of equipment</i></p> <p><i>Effort of raising tech. know-how</i></p>	<p><u>Interviewee response</u> Technology; <u>how do you go about mechanising [production in] St. Vincent which is a very hilly terrain, how do you go about producing more from cassava and have more from cassava, and have more cassava product, how do you go about marketing it...how do you develop the products</u>. within the Arrowroot Industry Association there was not that internal technical capability and as a manager, I tried to seek it I try to <u>develop relationships with the with the Chinese [Taiwanese technical mission]- the food technologist and with ECGC who have many experiences in marketing of starch materials and wheat based products and they have a fingers throughout the region and some parts of North America</u>. I make this sort of connections or at least I tried to make these connections. And I am not certain now how...if they are being sustained or if they are being developed at this point.</p>
<p>00:07:42</p>	<p><u>Interviewer Questions</u> In terms of a process, how did you as Manager go about assessing what opportunities there were or exactly are the emerging threats over that period...2004-2008 – what was happening, how did you go about determining that</p>

Appendix 12: Example of raw summarised interview data

Response from Interviewee A

- The AIA Legislation has remained unchanged over the years.
- The legislation is one of the problems.
- The legislation was fundamental in restricting the efforts to [revitalise the industry].
- If AIA is to be viable, it must be freed up by repealing the legislation/privatise. The law establishing the AIA was made [during the ear of preferential trade arrangements], so with the freeing of trade, the law remained restrictive to interested parties getting in or out of the industry. “Putting new wine in old wineskins. We want to have a modern industry, but to retain it in an umbrella of the old. So when that new begins to move and position itself, it must fracture that umbrella – it must bust it tear it here and there. And that didn’t seem to go down well. In other words people still wanted to hold on to the original. The old law was still in place. The overriding influence of the political directorate was still in place and so the thing didn’t go to its full extent”. The law should have been changed upfront, just as was done by other statutory bodies, including the BGA and SVMC. The law was not changed due to its political sensitivity to some people who do not want to have the status quo changed

Response from Interviewee B

- Low production levels lead to poor performance, regardless of the legislation

Response from Interviewee C

- The legislation would have restricted the AIA .The legislation needs to be changed for private sector to take over the AIA.
- The legislation did help, since farmers benefitted. The AIA structure has done well but there is room for improvement (MP/MoA).

Response from Interviewee D

- Maybe the times has come to review the legislation to facilitate more involvement o the private sector, but understanding the appeals and demands of the farmers (given their role in the production of arrowroot) to be a part of the administration of the industry, the Government may not free up to private enterprise without having farmers represented. To attract better people, the law would have had to be changed, but there would be need to give them good incentive, at a time when the industry had financial problems. The alternative would be to have people to willing to give true voluntary service, which is difficult.

Response from Interviewee E

- Inertia makes it difficult to stop the [AIA] from going down or from moving forward. These [problems] have been occurring since the law was chained [in 1976].
 - ...Subsequently, E.T. Joshua [then Premier] changed the CAA to give a fairer deal to the smaller man. [then Premier] Cato changed the law, the

Government had the final say in all decisions pertaining to the plant *Maranta arundinacea*; [the AIA] could be no changes in price or grades unless Government agreed. Any money borrowed, business transacted by the AIA had to be agreed to by cabinet. [With the 1976 change in the Law,] the total decision making is vested in the hands of the Government. The AIA is set up by Law [AIA Act]. The Prime Minister, through the Minister of Agriculture is the final arbiter. The farmers in the industry become participants. Their decision making has little or no bearing on the final outcome of [any] matters. If Government wants to go in the contrary way it goes on the contrary way. [The management and governance change] couldn't be implemented, since it meant relinquishing Cabinet's hold [on the [AIA]] and giving the management of the AIA freedom to act without being constrained by the law

Responses from Interviewee

- [Despite the threshold] it is known that farmers with less than 300, [and even] 100 baskets were allowed to crush their rhizomes. That strategy was allowed only for selected farmers.(OF)
- In 2001 the Government set about to reform the AIA and the arrowroot sector in general. The strategy was to establish the AIIP to transform the sector.(PS)
- The mechanical means of harvesting rhizome was turned to [as a strategy] [for dealing with the labour problem] (SF)

