

PUBLIC-PRIVATE COLLABORATION FOR EXPORT SUCCESS

CASE STUDIES FROM BARBADOS, GHANA,
INDIA, THAILAND AND MALAYSIA



International
Trade
Centre

EXPORT IMPACT FOR GOOD

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ABSTRACT FOR TRADE INFORMATION SERVICES

ID=42491

2011

F-01.04 PUB

International Trade Centre (ITC)

Public-private collaboration for export success: Case studies from Barbados, Ghana, India, Thailand and Malaysia
Geneva: ITC, 2011. ix, 101 p.

Compilation of case studies aimed at business leaders, policymakers and development practitioners, showcasing successful experiences of public-private dialogue in developing countries – outlines activities driven by the governments and targeted at private sector players in the form of public-private partnerships for service delivery and public-private consultative bodies; presents private sector initiatives targeted at public sector players in the form of business advocacy; demonstrates essential role of the private sector in trade and development through examples featuring the Barbadian tourism industry, customs services in Ghana, Thailand's automotive industry, Penang's export hub for electronics, and India's textile parks.

Descriptors: **Partnership, Public Sector, Private Sector, Case Studies, Barbados, Ghana, India, Malaysia, Thailand.**

English, French, Spanish (separate editions)

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FOREWORD

The global community firmly acknowledges the critical importance of the private sector as an engine of economic growth, sustainable development and poverty reduction. However, the private sector needs an enabling, business-friendly environment to effectively harness this potential.

Public-private collaboration has been a key driver in countries' strategies for successful integration into the global economy. Experience shows that governments in developing and least developed countries focusing on export-led growth strategies must establish a mechanism for sustained and inclusive dialogue between the public and private sectors.

Expanding global trade opportunities is the focus of the International Trade Centre's (ITC) work with enterprises, trade support institutions and policymakers. By developing a competitive private sector supported by strong and transparent institutions, exports can help to drive inclusive, sustainable development and become a positive force for good in communities.

Promoting public-private dialogue in formulating countries' trade policies, legal frameworks and regulatory mechanisms is at the heart of ITC's work. We bring public and private stakeholders together in a structured process to find solutions for issues affecting business performance and exports. We work together to design viable export and development strategies. ITC contributes to the effectiveness of these dialogues by, among other initiatives, supporting well-informed business advocacy through sharing experiences from around the world.

ITC commissioned the case studies in this book to showcase the successful experiences of public-private collaboration in developing countries engaged in the process of integrating into the global economy. In some instances, public-private dialogue has resulted in successful public-private partnerships.

The achievements in Barbados with the European Economic Partnership Agreement on tourism services; in Ghana with an integrated customs services; in Thailand's automotive industry; in Penang, Malaysia's export hub for electronics; and in India's thriving textile parks clearly demonstrate the essential role played by the private sector in trade and development.

Trade, development and poverty reduction are strongly linked. By creating the conditions for robust, sustainable, export-led growth, governments and the private sector are also making a valuable contribution towards achieving the United Nations Millennium Development Goals to reduce poverty.

We hope these success stories will inspire business leaders, policymakers and development practitioners to build on best practice for using development assistance to address market failures and to leverage private sector investment for the greater good. We also believe these stories make a strong case for Aid for Trade.

ITC believes now is the time to move from dialogue to action, which is exactly what has happened in the countries profiled in this book.



Patricia Francis
Executive Director
International Trade Centre

ACKNOWLEDGEMENTS

Introduction – Public-private collaboration for export success

Rajesh Aggarwal, Chief, Business and Trade Policy Section and Andrew Huelin, Consultant, Business and Trade Policy Section, ITC, wrote the introduction.

Chapter I – Business advocacy wins markets in Barbados

Natasha Ward, Trade Policy Analyst and Consultant with the Shridath Ramphal Centre for International Trade Law, Policy and Services, Barbados; and Pierre Sauvé, Deputy Managing Director and Director of Studies at the World Trade Institute, Bern, Switzerland, wrote this case study. They are entirely responsible for the views expressed herein.

A study of this nature entails consulting key actors in the negotiations. The authors are indebted to Samuel Chandler, Permanent Secretary (Foreign Trade Division) at the Ministry of Foreign Affairs, and Foreign Trade of Barbados; Julie Mapp, Consultant to the Foreign Trade Division of the Ministry of Foreign Affairs and Foreign Trade; Russell King, former Consultant to the Foreign Trade Division of the Ministry of Foreign Affairs and Foreign Trade; Ramesh Chaitoo, Chief Services Negotiator of the Caribbean Regional Negotiating Machinery; Lisa Gale, Chief Research Officer (ag.) with the Ministry of Tourism; Natalie DeCaires, Industry and Advocacy Manager with the Caribbean Hotel and Tourism Association and Sue Springer, Executive Vice-President of the Barbados Hotel and Tourism Association, for helpful discussions. Special thanks are also extended to Ramesh Chaitoo for his constructive and insightful comments in revising the draft of case study.

Chapter II – Boosting export competitiveness in Ghana

The case study has been prepared based on presentations made by Nortey Omaboe, Executive Chairman, GCNet, Ghana at an ITC seminar and on a paper prepared by Emmanuel Darko, Deputy General Manager, GCNet, Ghana. We also acknowledge the support of Mr. Omaboe in organizing visits of participants of ITC's programmes to the GCNet to discuss the operations and the factors contributing to the success of the GCNet.

Chapter III – Thailand's successful journey

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Chapter IV – Growing with global production sharing in Malaysia

Prema-Chandra Athukorala, Professor at the Arnd-Corden Department of Economics, Australian National University prepared this case study based on his field visits and interviews with senior officials of government and private sector economic facilitator organizations, senior managers of major MNE affiliates and representatives of chambers of commerce and industry. Interviewees include a number of ex-CEOs and senior managers of leading MNEs, officials of chambers of industry and trade, and former prominent policymakers, including Chet Singh, the founding General Manager of the Penang Development Corporation who held that position for over two decades.

Chapter V – Creating integrated textile parks in India

Biswajit Dhar, Director General, Research and Information System for Developing Countries, New Delhi, India; and T.S. Vishwanath, Principal Advisor with APS-SLG Law Offices, Delhi, India, wrote this case study with support from RCM Reddy and Prashant Sood of IL&FS Cluster Development Initiative Limited, New Delhi.

Other acknowledgements

The case studies were prepared under the overall guidance of Friedrich Von Kirchbach, Director, Division of Country Programmes ITC. Rajesh Aggarwal, Chief, Business and Trade Policy Section, ITC, supervised the preparation of all case studies. Andrew Huelin, Consultant, Business and Trade Policy Section coordinated the organization of material and assisted in the review process. Dianna Rienstra, Phoenix Ink Communications, Brussels, was the editor and advisor for this publication. The publication was managed by Natalie Domeisen. Desktop publishing was carried out by Lauréna Arribat.

CONTENTS

FOREWORD	iii	Cross-border supply and consumption abroad of services (Modes 1 and 2)	18
ACKNOWLEDGEMENTS	iv	Commercial presence (Mode 3)	18
ABBREVIATIONS.....	ix	Temporary presence of natural persons for business purposes (Mode 4).....	18
<hr/>		<hr/>	
INTRODUCTION	1	A MARKET ACCESS SCORECARD	19
<hr/>		Commitments vs. demands	19
THE UNITED NATIONS AND PRIVATE SECTOR DEVELOPMENT	2	Mutual recognition	20
PUBLIC-PRIVATE DIALOGUE IN TRADE POLICY IS CRITICAL	3	Competition policy disciplines	20
TOWARDS A BALANCED APPROACH	4	Trade-related capacity building.....	21
Sustainable constituencies for trade policy and regulatory reform	4	CONCLUSION.....	21
Broadening good policy options	4	<hr/>	
Insights from the business perspective	5	CHAPTER II	25
Ensuring credibility and support for policy reform..	5	BOOSTING EXPORT COMPETITIVENESS IN GHANA.....	25
CHALLENGES TO EFFECTIVE PUBLIC-PRIVATE DIALOGUE.....	6	CASE STUDY EXECUTIVE SUMMARY	26
PRE-REQUISITES FOR DIALOGUE.....	7	INNOVATIVE TRADE FACILITATION	27
FIVE COUNTRY CASES	7	The private sector umbrella body	27
<hr/>		Export-led growth through customs reform.....	27
CHAPTER I	11	An electronic community network.....	27
BUSINESS ADVOCACY WINS MARKETS IN BARBADOS.....	11	OVERCOMING CHALLENGES	28
CASE STUDY EXECUTIVE SUMMARY	12	Choosing the right partners.....	28
A SNAPSHOT OF TOURISM IN BARBADOS	13	Selling the project	29
Recent industry performance	13	MAKING LEGAL AND REGULATORY CHANGES.....	29
BUSINESS ADVOCACY GROUPS GET ORGANIZED	14	Addressing technical aspects	30
Engaging in stakeholder advocacy	15	OPERATING THE PROJECT.....	30
Collaborating and formulating positions	15	Managing change.....	31
The Government reacts favourably	15	PROJECT ACHIEVEMENTS	32
The role of the Caribbean Hotel and Tourism Association.....	15	Simplifying customs procedures	32
A BETTER LANDSCAPE FOR TOURISM SERVICES.....	18	Clearing goods faster	32
Market access gains	18	Facilitating transit with a satellite tracking system.....	32
		Increasing revenue collection	32
		Improving export competitiveness.....	33
		SUCCESS FACTORS	33
		Government support.....	33
		Credible partners	34
		Project-specific infrastructure.....	34

A phased approach.....	34		
Tangible benefits	35		
Training, sensitization and capacity building	35		
Responsiveness to emerging trends	35		
Sustainable self-financing	35		
IMPLEMENTATION CHALLENGES.....	36		
Overcoming individual and institutional resistance	36		
Ensuring compliance.....	36		
Upgrading processes in other agencies	36		
Assuring confidence and ensuring security.....	36		
CONCLUSION.....	37		
<hr/>			
CHAPTER III	41		
<hr/>			
THAILAND'S SUCCESSFUL JOURNEY	41		
CASE STUDY EXECUTIVE SUMMARY	42		
THAILAND'S RESPONSIVE POLICY ENVIRONMENT.....	43		
Setting the stage for industrial growth	43		
Economies of scale	44		
FROM IMPORT SUBSTITUTION TO GLOBAL INTEGRATION.....	44		
INDUSTRY EVOLUTION.....	45		
CHANGING DYNAMICS OF PRODUCTION	46		
Export trends and patterns	48		
THE INDUSTRY'S GROWING ROLE IN THE ECONOMY	49		
THAILAND'S POSITION IN PRODUCTION NETWORKS.....	51		
Linkages: assembler and parts suppliers	51		
WHAT DROVE THAILAND'S SUCCESS?	53		
Global shifts in the industry	53		
Favourable, stable policy environment	54		
Domestic market size matters	55		
CONCLUSION.....	55		
ANNEX I: CHARTING TRADE AND INVESTMENT POLICIES 1960-2008	57		
ANNEX II: THE EVOLUTION OF THE DENSO AFFILIATE IN THAILAND, 1973-2005	58		
		<hr/>	
		CHAPTER IV	61
		<hr/>	
		GROWING WITH GLOBAL PRODUCTION SHARING IN MALAYSIA.....	61
		CASE STUDY EXECUTIVE SUMMARY	62
		THE RISE OF GLOBAL PRODUCTION	62
		PENANG'S ORIGINS AS AN EXPORT HUB.....	63
		POLICY REFORMS REVITALIZE THE ECONOMY	63
		National – local coordination	64
		Free trade zones, industrial states and infrastructure development.....	65
		Investment promotion	65
		Forging MNE-SME links.....	66
		Vocational training programmes	66
		Lessons from failed projects.....	68
		EVOLUTION OF THE EXPORT HUB	68
		Ancillary industries emerge.....	69
		From semiconductors to consumer electronics and computer peripherals.....	71
		PENANG WEATHERS GLOBAL CHANGES	72
		Moving into high-value tasks	72
		Diversifying product lines.....	73
		Considerable prospects for expansion.....	73
		INVESTMENT TRENDS AND COMPANY PROFILES	74
		EXPORT PERFORMANCE	78
		A VIBRANT INDUSTRIAL CENTRE WITH ECONOMY-WIDE IMPACT	80
		CONCLUSION.....	85
		ANNEX: SOURCES AND METHODOLOGY.....	87
		<hr/>	
		CHAPTER V	91
		<hr/>	
		CREATING INTEGRATED TEXTILE PARKS IN INDIA	91
		CASE STUDY EXECUTIVE SUMMARY	92
		MARKET TRENDS.....	92
		Sluggish growth.....	94

ESSENTIALS FOR INTEGRATED TEXTILE PARKS ...	95
Financing.....	96
Shared infrastructure, facilities and costs.....	96
Implementation through public-private partnerships.....	96
Project management	97
Administrative mechanisms	97
The role of state governments	97
POCHAMPALLY HANDLOOM PARK	97
More profits for producers	98
Strategies for success	99
BRANDIX INDIA APPAREL CITY	99
A foreign direct investment showcase	100
Government infrastructure	100
Park infrastructure	100
CONCLUSION.....	100
A replicable model.....	100

TABLES

Table 1: Strengthening the effectiveness of private sector development activities	3	Table 14: Ownership structure of manufacturing firms in Penang, as of August 2008	75
Table 2: Main elements of the CARIFORUM access requests on tourism.....	17	Table 15: Top 25 foreign enterprises in Penang: employment and product lines, as of August 2008.....	76
Table 3: Highlights – Tourism market access commitments to CARIFORUM in the EPA.....	19	Table 16: Top 25 local enterprises in Penang, as of August 2008.....	77
Table 4: Production capacity (units) of Thai car assemblers, 1989-2006	46	Table 17: Home-country profile of foreign firms in Penang, 2007.....	79
Table 5: Production capacity of carmakers classified by type of vehicles, 2006.....	47	Table 18: Merchandise exports from Penang – value, composition and share of total Malaysian exports.....	79
Table 6: World motor automobile production – top 20 producing countries, 2000 and 2008.....	48	Table 19: Penang’s manufactured exports: composition, export/output ratio and foreign firms’ share in exports, 2005....	81
Table 7: Automobile exports and imports classified by vehicle type, 1999-2007.....	50	Table 20: Per capital GDP in Malaysia and Malaysian States and federal territories	82
Table 8: Direction of automobile exports from Thailand, 1999-2007 (%).....	50	Table 21: Mean monthly gross household income and incidence of poverty, 2004 and 2009	83
Table 9: Automobile (CBU) production in Thailand classified by carmakers, 2000 and 2008	52	Table 22: Composition of GDP and employment in Penang, 1970-2008	83
Table 10: Domestic automobile sales in Indonesia, Malaysia, the Philippines and Thailand, 1980–2005	56	Table 23: Foreign-ownership in Malaysian manufacturing – Penang in the national context, 2005	84
Table 11: Domestic vehicle sales in Thailand classified by vehicle type, 1990-2008	56	Table 24: Manufacturing employment, capital per worker, labour productivity and average wage/salary: Penang in the national context, 2005	84
Table 12: Branch plants of multinational enterprises operating in Penang, 1970-2004.....	74	Table 25: Scope of Indian textiles and clothing industry, 2000-2009	93
Table 13: Approved investment in Penang, 1980-2008	75		

FIGURES

Figure 1: Policy desirability and administrative and political feasibility.....	5	Figure 10: Value, volume and price indices of electronics exports from Malaysia, 1997-2009.....	80
Figure 2: Real growth rate of the tourism industry, 2001-2007.....	14	Figure 11: Malaysian patent registration: Selangor, Penang and other states, 1976-2006.....	85
Figure 3: Before and after – Streamlined processes save time.....	31	Figure 12: Growth performance of textiles and clothing sector, 2001-2008.....	93
Figure 4: Revenue grows at Kotoka International Airport, 2002-April 2008.....	33	Figure 13: Yarn production, 2000-2008.....	93
Figure 5: Volume of vehicle production and share of vehicle exports, 1961-2008.....	47	Figure 14: Cloth production, 2000-2008.....	94
Figure 6: Share of automotive exports in total merchandise exports from Thailand, 1990 to 2008.....	49	Figure 15: Production of ready-made garments, 2000-2008.....	94
Figure 7: Automobile exports from Thailand, 1990-2009.....	49	Figure 16: Share of textiles and clothing in India’s total exports, 2000-2009.....	95
Figure 8: Pattern of regional division of labour of the automotive industry in Southeast Asia.....	52	Figure 17: Job creation - Pochampally’s three-stage strategy.....	98
Figure 9: Manufactured exports from Penang: value and share in Malaysian exports, 1990-2009.....	78		

BOXES

Box 1: Public-private cooperation improves Malaysia’s business environment.....	8	Box 7: The Penang Skill Development Centre – excellence in training to supply multinationals.....	67
Box 2: Highlights of the private sector trade team’s market access requests on tourism.....	16	Box 8: Intel’s vendor development programme.....	69
Box 3: WTO modes of supply.....	16	Box 9: Eng Teknologi Holdings Berhad: from backyard workshop to multinational corporation.....	70
Box 4: Before and after GCNet: clients see the difference.....	30	Box 10: LKT Industrial Berhad: from humble foundry to contract manufacturing.....	71
Box 5: GCNet – geographic coverage.....	34	Box 11: Pochampally Handloom Park – accomplishments.....	99
Box 6: The FTZ incentive package.....	66		

ABBREVIATIONS

The following abbreviations are used:

ACP	African Caribbean Pacific	SITP	Scheme for Integrated Textile Parks
ATC	Agreement on Textiles and Clothing	SMEs	Small and medium-sized enterprises
AMD	Advanced Micro Devices	SERI	Socio-Economic and Environmental Research Institute
ASEAN	Association of Southeast Asian Nations	SGS	Société générale de surveillance
PSTT	Barbados Private Sector Trade Team	SPV	Special purpose vehicle
BOI	Board of Investment	SITC	Standard International Trade Classification
BIAC	Brandix India Apparel City	WTO	World Trade Organization
CRNM	Caribbean Regional Negotiating Machinery		
CARICOM	Caribbean Community		
CHTA	Caribbean Hotel and Tourism Association		
CPC	Central Product Classification		
CBU	Completely built units		
CKD	Completely knocked down		
CEPS	Customs Excise and Preventive Service		
EPA	Economic Partnership Agreement		
EDI	Electronic data interchange		
EU	European Union		
FDI	Foreign direct investment		
FTAs	Free trade agreements		
FTZs	Free trade zones		
GATS	General Agreement on Trade in Services		
GM	General Motors		
GCNet	Ghana Community Network Services Limited		
GPHA	Ghana Ports and Harbours Authority		
GSC	Ghana Shippers' Council		
ICT	Information and communications technology		
ITP	Integrated textile park		
IFC	International Finance Corporation		
ISO	International Organization for Standardization		
ITC	International Trade Centre		
LEDs	Light-emitting diodes		
LCR	Local content requirement		
MIDA	Malaysian Industrial Development Authority		
MDGs	Millennium Development Goals		
MFN	Most favoured nation		
MFA	Multifibre Arrangement		
MNEs	Multinational enterprises		
MRA	Mutual Recognition Agreements		
OEM	Original equipment manufacturer		
PDC	Penang Development Corporation		
PSDC	Penang Skills Development Centre		
PCBA	Printed circuit board assembly		
PAC	Project Approval Committee		
PMC	Project management consultant		
PPD	Public-private dialogue		
PPPs	Public-private partnerships		



INTRODUCTION

PUBLIC-PRIVATE COLLABORATION FOR EXPORT SUCCESS

THE UNITED NATIONS AND PRIVATE SECTOR DEVELOPMENT	2
PUBLIC-PRIVATE DIALOGUE IN TRADE POLICY IS CRITICAL.....	3
TOWARDS A BALANCED APPROACH.....	4
CHALLENGES TO EFFECTIVE PUBLIC-PRIVATE DIALOGUE	6
PRE-REQUISITES FOR DIALOGUE.....	7
FIVE COUNTRY CASES	7

INTRODUCTION

PUBLIC-PRIVATE COLLABORATION FOR EXPORT SUCCESS

The world's pressing problems are far too complex and resource-intensive to be addressed by the public sector alone. It is now widely recognized that a healthy, vibrant and competitive private sector is vital to ensuring growth and reducing poverty. The private sector has the potential to be an engine for economic growth, improving individual well-being in all countries.

This is a significant shift in development thinking and practice. However, institutional responses at the national level to harness the potential of the private sector and include it as a development partner are still evolving.

Until recently, mainstreaming this approach into the development approaches of national governments, donor governments and multilateral organizations has been limited. The United Nations supports private sector development, particularly as a fundamental way to advance the Millennium Development Goals (MDGs).

ITC commissioned five case studies to showcase the successful experiences of public-private collaboration in developing countries. Some case studies outline activities driven by governments and targeted at private sector players in the form of public-private partnerships for service delivery and public-private consultative bodies.

Other initiatives are driven by private sector players and targeted at public sector players in the form of business advocacy. In some instances, public-private dialogue has resulted in highly successful public-private partnerships, as in the case of Ghana where the private sector is a shareholder in an initiative to integrate customs services.

The cases cover from the following countries and sectors:

- Barbados – tourism;
- Ghana – customs services;
- Thailand – automotive industry;
- Malaysia – sourcing multinationals;
- India – textiles.

THE UNITED NATIONS AND PRIVATE SECTOR DEVELOPMENT

“Poverty is something that no one should endure. Markets can flourish only in societies that are healthy. And societies need healthy markets to flourish. That is why we have to boost our private-public alliance. We need to bring knowledge, resources and innovation together in a way that links sustainability with opportunities for growth.”

Ban Ki-moon, United Nations Secretary-General

These remarks by the UN Secretary-General on the occasion of the First Private Sector Forum on the Millennium Development Goals in 2008 emphasized a shift in thinking at the UN level that had begun much earlier. To track the origins of this shift it is useful to draw upon earlier events.

The international community established the MDGs in 2000 to eradicate poverty. They outlined new roles for the private sector, primarily as:

- An engine of improved economic growth;
- A means to generate the required domestic resources for investments in human resource development through health, infrastructure and education;
- A potential provider of some of these essential services;
- A direct partner in trade and technology transfers.

The UN Millennium Project recommended that each government collaborate with the private sector to design a development strategy to help create a favourable business environment. Government actions are essential to creating an enabling environment for public sector development that diminishes the risks, lowers the costs and barriers, and raises the rewards and opportunities for competitive and responsible enterprises.

In July 2003, to respond to the slow progress made on achieving the MDGs, then UN Secretary-General, Kofi Annan requested a Commission on the Private Sector and Development as a fundamental way to advance the MDGs. He noted:

“Our experience has shown that a large part of the work for development is about preparing the ground for sufficient private sector activity to provide the jobs and income needed to build a more equitable and prosperous society.

Yet, the UN has only sporadically tapped the power that can be drawn from engaging the private sector in the work of development.”

The Commission was tasked to answer two fundamental questions: ‘How can the potential of the private sector and entrepreneurship be awakened in developing countries?’ and ‘How can the existing private sector be engaged in meeting that challenge?’

The Commission created a conceptual framework and a series of activities. Although the conceptual framework was not specifically designed for the trade and development context, it is very relevant (see table 1). The Commission promotes a new type of alliance between large and small companies, between public and private actors, between foreign and domestic entities, and between commercial and social investors. Activities can be driven by public actors (local governments, donor governments and development agencies) and private actors (companies, civil society organization and foundations) in three fundamental spheres:¹

- **The public sphere**, promoting the reform of laws, regulations and other barriers to growth;
- **The public-private sphere**, facilitating cooperation and partnerships between public and private players to enhance access to such key factors as financing, skills and basic services;

- **The private sphere**, encouraging the development of business models that can be scaled up and copied and that are commercially sustainable.

The activities detailed in table 1 are based on the foundations of private sector development: the global and domestic macroeconomic environment; physical and social infrastructure and the rule of law; and the pillars of entrepreneurship – access to finance, skills and knowledge. This necessitates reforming laws, regulations and other barriers to growth; facilitating cooperation and partnerships between public and private players to enhance access to productive resources; and encouraging the development of business models that can be successfully replicated and that are commercially sustainable. As stated in the *Unleashing Entrepreneurship* report:

“Most of the recommended actions involve more than one of the actors working together. Where governments are implementing policy change, it is often with the direct support and involvement of multilateral development institutions.

Where the private sector is taking a more active stance on sustainable development, it is often with civil society raising the profile of this issue. Where governments are implementing regulatory reform, it may be in direct consultation with representatives of the private sector.”

PUBLIC-PRIVATE DIALOGUE IN TRADE POLICY IS CRITICAL

Private operators alone cannot achieve optimal allocation of resources and state actors may not be able to address

Table 1: Strengthening the effectiveness of private sector development activities

	Targeted at public sector players	Targeted at private sector players
Driven by private sector players <ul style="list-style-type: none"> ▪ Companies ▪ Civil society organizations ▪ Foundations 	Setting broader standards (industry norms, sustainability, corporate governance) <ul style="list-style-type: none"> ▪ Lobbying for policy changes ▪ Promoting participatory processes through social dialogue 	<ul style="list-style-type: none"> ▪ Business linkages and partnerships ▪ Investment, including foreign direct investment (FDI) ▪ Mentorship for entrepreneurs
Driven by public sector players <ul style="list-style-type: none"> ▪ Local governments ▪ Donor governments ▪ Development agencies 	<ul style="list-style-type: none"> ▪ Policy reform ▪ Policy advice ▪ Funding and delivering technical assistance for public sector reforms ▪ Financial transfers (aid, loans) 	<ul style="list-style-type: none"> ▪ Public-private partnerships, for example, for basic service delivery ▪ Public-private consultative bodies ▪ Privatization or contracting ▪ Investment promotion ▪ Direct business development services ▪ Direct financing

Source: *Unleashing Entrepreneurship* (Commission on the Private Sector and Development, UNDP, 2004). Available at: <http://www.undp.org/cpsd/documents/report/english/fullreport.pdf>.

market failures on their own. Effective public-private dialogue can address failures in government policy designed to overcome market failures. It can also reduce policy uncertainty, promote innovation and create wealth.

Effective public-private dialogue takes place within a structured mechanism at the highest level of government. The objective is to facilitate the reform process by involving a balanced range of public and private sector actors. In 2010, the case for collaboration between the private sector and government in socio-economic development was summed up by economist Dirk Willem te Velde, Programme Leader of the Investment and Growth Programme at the United Kingdom's Overseas Development Institute:²

“There are market failures (the market alone cannot achieve an optimal allocation of resources) and there are government failures (state actors may not be able to address market failures on their own). Effective business and government interaction can address such market and coordination failures and government failures through cooperation, and can reduce policy uncertainty.

When the state and business interact effectively, they can promote more efficient allocation of scarce resources, conduct more appropriate trade policies and regulations, remove the biggest obstacles to trade and create wealth more efficiently.”

TOWARDS A BALANCED APPROACH

For markets to work efficiently and deliver desired outcomes, an effective government is needed to create an enabling environment, provide public goods such as infrastructure, and mitigate negative externalities, such as pollution and other harmful environmental effects.

A further challenge in many countries is to enhance transparency and accountability in the design and implementation of policies aimed at fostering private sector development to ensure that private sector-led growth can benefit society as a whole.

Today, many governments are anxious to demonstrate that they are responding to business by creating an enabling pro-business environment to boost investment and economic activity. Because regulation is needed in some instances, many governments are increasingly seeking the advice of the private sector.

ITC supports public-private dialogue because it is the foundation of business advocacy in trade policy. Through business advocacy, business organizations aim at influencing government and policies and become an integral part of the legitimate and democratic process of policymaking in developing countries and emerging markets.

In terms of optimizing effective public-private interactions, there exist considerable differences between countries. Some have been more adept and able to overcome negative perceptions of private sector involvement, such as rent-seeking and collusive behaviour. Others have been less inclined or adept at engaging with the private sector. The case studies presented in this book showcase some successful experiences of public-private interaction.

Effective public-private dialogue leads to mutually beneficial collaboration between the government and the private sector. Public-private dialogue can lay a foundation for public-private collaboration and public-private partnerships.

SUSTAINABLE CONSTITUENCIES FOR TRADE POLICY AND REGULATORY REFORM

Policy reforms are the most tangible benefits of public-private dialogue. These can include new legislation, amending or scrapping of existing legislation, removing or simplifying regulations and controls, standardizing procedures across different jurisdictions and establishing new institutions.

While the structured consultation of a public-private dialogue mechanism can have an immediate effect in improving the quality of particular reform efforts, its deeper benefit lies in building a sustainable constituency for trade policy and regulatory reform. The increased transparency and participation in the trade policy processes is recognized as enhancing trust and confidence in the process, which in turn facilitates implementing trade policy and regulatory decisions. Some of the main benefits of such dialogues are summarized below.

BROADENING GOOD POLICY OPTIONS

The World Bank's Public-Private Dialogue Handbook³ notes that public-private dialogue can contribute to the policy, administrative and political feasibility, or the political economy, of reform issues. According to the World Bank, the political economy of the reform process depends on three related elements:⁴

- **Policy desirability** – the political interest of the government in investing efforts in reforms, depending on factors such as commitment of the leadership, configuration of political factions, upcoming elections, advocacy by private sector and civil society organizations, the macroeconomic situation, etc.

- **Administrative feasibility** – the institutional capacity to develop and manage public institutions within the framework of public sector reform processes.
- **Political feasibility** – the coherence of the framework of different reform processes and the institutional capacity to manage reform processes.

As the World Bank Handbook suggests:⁵

“PPD [public-private dialogue] can contribute to all three elements. Its main impact is likely to be on raising the importance of issues on the government’s agenda and building a constituency for reform, and thus increasing the policy desirability and feasibility of these reforms.”

Through government participation in PPD, officials are exposed to exchange of experiences that contribute to capacity building within the public sector. However, additional efforts are needed to build capacity for public sector reform processes.”

The relationship among these three elements is shown in figure 1.

INSIGHTS FROM THE BUSINESS PERSPECTIVE

Governments that recognize the constraints faced by the private sector tend to develop reasonable prioritization plans and workable reforms. Trade policy decisions and negotiation strategies refined through a consultative

process that engages legislatures, business groups and civil society are frequently more effective. This dialogue ensures that trade policies are better attuned to the commercial environment, which makes the policies more broadly endorsed and sustainable.

Public-private dialogue can help government tap into the experience of firms, a potentially valuable resource for designing public policies. The effectiveness of economic policies would be significantly enhanced if the private sector could provide policymakers and bureaucracies with the information they need to anticipate the likely impact of policy changes.

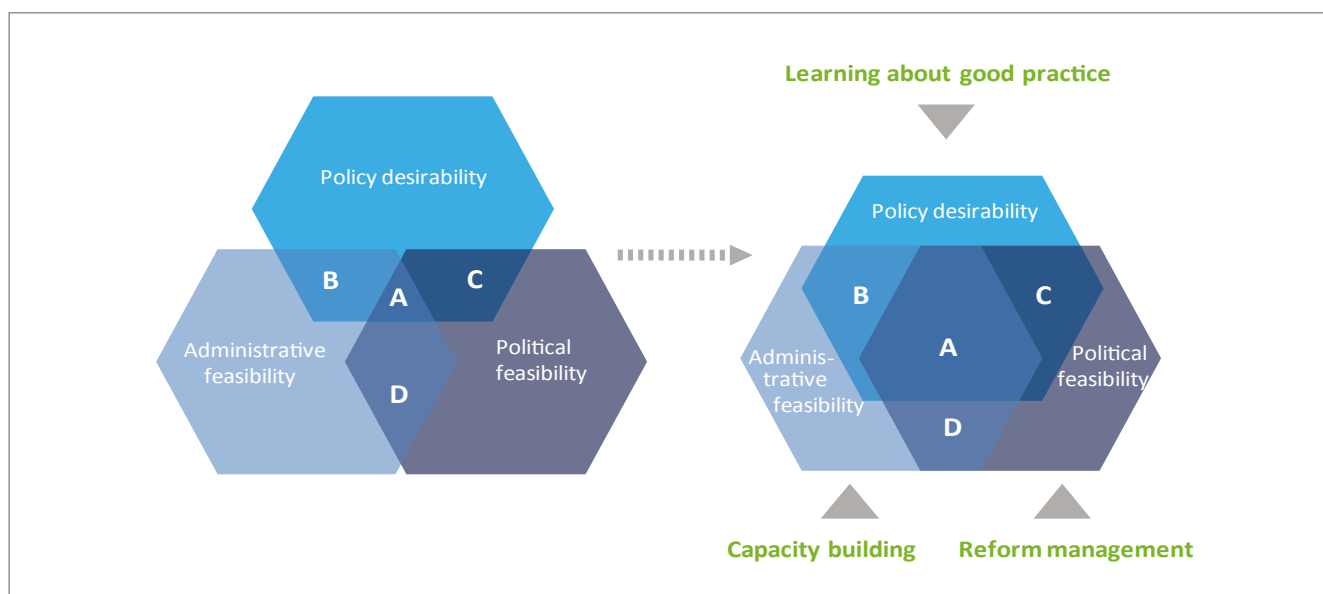
There are myriad different sectors, approaches and actors that governments could choose to prioritize for assistance and policy reforms. Governments must determine which sectors and regulatory reform issues are the major stumbling blocks to effective trade, and devise plans accordingly. Collaborating with the private sector gives policymakers the information they need to set priorities.

ENSURING CREDIBILITY AND SUPPORT FOR POLICY REFORM

Public-private dialogue is a tool that government can use to change the private sector’s perception of policy, gain credibility, share information and establish a reputation for favouring private sector development. Governments that pay attention to the private sector are better placed to design and execute credible and effective reform programmes. Entrepreneurs who are involved in the reform process will be more inclined to support policy reforms.

Through active engagement with the private sector, greater consensus about and ownership and credibility of policy

Figure 1: Policy desirability and administrative and political feasibility



Source: The Public-Private Dialogue Handbook: A toolkit for business environment reformers, *World Development Report 2005*, World Bank, 2005.

reforms and negotiating positions can be obtained. This builds trust and enhances the capability and credibility of policymaking. The Organisation for Economic Co-operation and Development reports that in Mexico, consultative bodies linked to the Economic Solidarity Pact (a stabilization programme in late 1980s) helped in the 1990s to move from a situation of mutual suspicion to 'generate greater understanding, trust and networking' between government and top business leaders.⁶

An effective public-private dialogue process can make government aware of the impact of reforms on the ground, as well as generate greater awareness of the changes. There must be a clear structure in place:⁷

“Without the structure imposed by public-private dialogue, business advocacy tends to find a narrower outlet: one sector lobbies for a specific reform, which then has unwelcome effects in other sectors, which lobbies for its reversal, and so on.

The monitoring and evaluation systems put in place by a [public-private dialogue] initiative promotes a culture of compliance and entice governments to perform regulatory impact assessments.”

CHALLENGES TO EFFECTIVE PUBLIC-PRIVATE DIALOGUE

The context for public-private sector dialogue influences the quality and outcome of dialogue greatly. Many developing countries have weak public and private sector institutions, absence of a culture of consultation and inclusiveness, rivalries among private sector institutions, and in some cases, lack of representation. These lead to four challenges for effective dialogue:

- **Reinforcing vested interests.** Public-private dialogue creates both an opportunity and a risk when other lines of communication between government and society are weak. Done poorly, public-private dialogue can result in an unhealthy influence by an unrepresentative group of stakeholders, reinforce links between politicians and lobbyists, and provide a veneer of legitimacy for bad policies.
- **Speaking with one voice.** In many countries the private sector is not well-organized and does not speak with one voice. Not all private sector interests can be reconciled, as views may be fundamentally opposed depending on the issues. However, there is still an urgent need to come together and speak with a coherent and unified voice.
- **Fair and broad representation.** The process of consultation is a means of generating consensus on public policy. Broad representation is an effective means

of overcoming vested interests that undermine the process.

- **Negative attitudes to dialogue.** Successful dialogue depends on the mindset and capacity of the participants. In particular, the attitude of the public sector can promote or destroy the public-private dialogue process. The highest-level government officials must encourage and participate in such dialogues. Effective communication is the key to any meaningful dialogue process.

Business advocacy is typically resource-intensive and technical in nature. It involves engaging members to gather information, identifying concerns, conducting analysis, reconciling different interests and initiating appropriate follow-up action with the government. However, in many developing countries, in particular the least developed among them, business associations typically have low levels of financial and human resources, which adversely impacts on their ability to meaningfully participate in trade policy development.

A lack of funding often prevents business associations from developing the required level of technical and sophisticated knowledge on trade policy and negotiations issues to engage effectively with government agencies. Other challenges include:

- **Short-term perspective.** Returns on business advocacy in trade policy must be considered within a long-term perspective. Industry leaders in developing countries often have a short-term view.
- **High risk.** Returns on business advocacy are more risky in developing countries due to political instability, lack of transparency and lack of a participatory approach to trade policymaking.
- **Resistance to change.** Resistance to change is partly due to the lack of awareness and knowledge of the benefits of change to the status quo. The process of globalization can exacerbate feelings of insecurity and threat.
- **Lack of economies of scale.** The potential benefits of lobbying in trade policy tend to be lower for the developing country industries, especially for small and medium-sized enterprises (SMEs), due to the lack of economies of scale.

The government needs political will and leadership to engage. A strong commitment and a conscious effort by the political leadership and senior civil service officials are needed to encourage consultative processes and drive their activities. Also critical is the will to reform. Without both public and private champions investing in and driving the process, it is difficult to sustain public-private dialogue and achieve reforms.

In many cases, middle and lower level government officials must be sensitized as to the importance of engaging with the private sector. As the host, government must establish a forum where robust dialogue and knowledge sharing are supported. Champions from both the public and the private sectors need to drive the dialogue, promote the concept,

devote time and effort and give public-private dialogue credibility, expertise and publicity.

PRE-REQUISITES FOR DIALOGUE

A number of pre-requisites are required for effective consultative mechanisms.

- There should be political will to engage in serious consultations. However, consultative mechanisms can help build political will.
- Participants in the process should be able to make credible commitments.
- Reform objectives should be well defined and specific.
- Internal processes and procedures should be transparent and participatory.
- There should be an independent and adequately financed secretariat to support the consultative process.
- The consultative mechanism membership should be authoritative and representative.
- There should be follow-up procedures for monitoring agreements.
- The consultative mechanism objectives and activities should be realistic about what is achievable in the country's economic, political and social context.

Box 1 outlines an excellent example of public-private collaboration for export success.

FIVE COUNTRY CASES

The case studies in this book describe different methods and achievements of successful public-private dialogue.

In Barbados, the public and private sectors worked together to ensure the country was able to secure better access for its tourism service providers and investors under the CARIFORUM-EU Economic Partnership Agreement (EPA).

In Ghana, public-private dialogue resulted in a public-private partnership and a highly successful initiative to integrate customs services. This resulted in boosting Ghana's ratings as a good place to do business and government tax revenues.

In Thailand, a business friendly, government-led industrial development strategy has resulted in a parts and components supplier network in the country, which impressively increased local content in Thai-made cars.

The export production hub in the State of Penang, Malaysia, provides a valuable laboratory for a study of government policies and global sourcing strategies of multinational enterprises (MNEs) in determining developmental gains from global production sharing.

To revive the country's declining textile industry, the Government of India introduced the Scheme for Integrated Textile Parks (SITP), designed to strengthen infrastructural facilities in potential textiles growth areas with active participation of the private sector. With the SITP, the Government envisages India securing a 7% share in the global textiles trade by 2012.

These cases provide a range of successful examples that address many of the underlying concerns in laying the foundations for successful trade. Readers can apply the lessons of these cases to their own context.

Box 1: Public-private cooperation improves Malaysia's business environment

The Malaysian example showcases the benefits of effective public-private dialogue and cooperation.

The importance of trade in the Malaysian economy made it imperative for the Government to create a business-friendly environment. Recognizing the growing role of the private sector in export-led economic growth, the Malaysian Government decided it was crucial to view the private sector as an important public sector partner to achieve economic growth and prosperity.

In February 1983, the Government introduced the Malaysia Incorporated concept to create a new and enhanced relationship between the Government and the private sector. This was an evolution over the previous system of ad hoc and informal consultations between the Government and the business community. The Malaysia Incorporated concept institutionalized public-private sector collaboration.

The fundamental principle of Malaysia Incorporated is that the public and private sectors believe that the nation is a corporate entity, jointly owned by both sectors, and that both are working in pursuit of shared goals. The benefit of this cooperation for the private sector is a higher level of profit leading to increased investment and growth. The Government's interest in the success of Malaysia Incorporated includes generating employment opportunities, economic development and increasing revenue, which fuels social and economic development.

The introduction of Malaysia Incorporated has changed the perception of a dichotomy between the roles of the public and private sectors. The public sector, entrusted with safeguarding public interest, has long emphasized its regulatory role over the conduct and activities of the private sector. Under the Malaysia Incorporated concept, the public sector was required to redefine its role in relation to business activities and to embark on new approaches to facilitate the private sector's role in driving economic development.

The Government established structural mechanisms and issued several directives to facilitate public-private cooperation and consultation through:

- Establishing Consultative Panels in each Ministry/Department/Office at federal, state and district levels;
- Designating secretaries general, directors general, state secretaries, and district officers as chairs of the Consultative Panels, with membership comprising representatives from both the public and private sectors;
- Organizing regular meetings and an Annual Dialogue Sessions with the private sector;
- Identifying the Secretariat for the Consultative Panels in each agency and designating an official to liaise with members from the private sector;

- Taking actions on matters discussed and decided upon at Consultative Panel meetings.

The terms of reference of the Consultative Panels established under this initiative include:

- Simplifying rules, regulations and procedures related to the activities of the public sector;
- Preparing guidebooks to facilitate understanding of rules, regulations and procedures;
- Transparent decision-making process and reducing discretionary powers;
- The timely delivery of government services to the private sector.

It took some time for government departments and agencies to work closely with the private sector. This new approach was not part of the work culture. Moreover, the policy was not well understood or valued. At the same time, it did not elicit the appropriate responses from both the public and private sectors. Participants were less frank and candid in their engagement. However, with greater appreciation of the need for close cooperation, the environment improved over the years.

Strong commitment and conscious efforts by the political leadership and senior civil service officials to encourage the Consultative Panels to invigorate their activities have substantially contributed to effectively implement Malaysia Incorporated. They urged civil servants to deliver high quality services and to increase their interaction with the private sector. This was complemented by specific measures to intensify training of the middle and lower level civil servants to enhance their understanding of the Malaysia Incorporated concept and to change their mindset and attitude. In addition, the planned, coordinated and coherent manner in which the Government implemented the policy contributed to its success.

The private sector recognized the benefits of this working relationship and strongly supported the initiative. The Federation of Malaysian Manufacturers (FMM*), an umbrella organization of the manufacturing sector, played a proactive role by providing critical feedback and inputs to the Government on policy as well as operational issues.

FMM has provided an effective platform for the private sector for sectoral consensus building and networking based on consultation among its members. FMM's organizational and financial strength and the attention given to professional development of its staff members greatly contributed to FMM's success in making maximum use of the forum provided by Malaysia Incorporated.

* FMM's membership represents about 20% of the companies engaged in Malaysia's manufacturing sector. Generally, they are large companies that account for about 75% of country's industrial output.

In February 2007 there was an important development in the public-private sector partnership consultative mechanism. The Government established the Special Taskforce to Facilitate Business (PEMUDAH) to carry the spirit of Malaysia Incorporated to a much higher level.

Reflecting the close working relationship between the public and private sectors, PEMUDAH is co-chaired by the chief secretary to the Government of Malaysia and the past president of the FMM. The concept of co-chairmanship is different as public sector officials chaired previous forums. This reflects an even stronger commitment by the Government to engage the private sector as an equal partner.

PEMUDAH has been assigned a monitoring responsibility to ensure that reforms are sustained and embedded in the public delivery system. The PEMUDAH model is intended to take public-private collaboration beyond the level of dialogues that often achieve no more than discussing issues of concern.

PEMUDAH's mandate includes simplifying rules, regulations and procedures, and enhancing transparency. However, it also includes discussing policy issues for improving the Malaysian business environment. A Permanent Secretariat provides back-up support and monitors the progress of implementing Task Force decisions.

Since its inception, PEMUDAH has leveraged the enhanced public-private sector collaboration and successfully implemented many initiatives and measures. Trade facilitation is one such area in which notable progress has been made over the past three decades to implement reforms in customs policies, legislation procedures and practices. These have significantly improved the operating environment for business and boosted national competitiveness.

Source: D. Supperamian, Public-Private Sector Collaboration for Improving the Business Environment in Malaysia (case study for Business and Trade Policy programme), International Trade Centre, 2010.

ENDNOTES

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CHAPTER I

BUSINESS ADVOCACY WINS MARKETS IN BARBADOS

TOURISM SERVICES LIBERALIZATION UNDER THE CARIBBEAN-EUROPEAN UNION ECONOMIC PARTNERSHIP AGREEMENT

CASE STUDY EXECUTIVE SUMMARY.....	12
A SNAPSHOT OF TOURISM IN BARBADOS.....	13
BUSINESS ADVOCACY GROUPS GET ORGANIZED.....	14
A BETTER LANDSCAPE FOR TOURISM SERVICES.....	18
A MARKET ACCESS SCORECARD.....	19
CONCLUSION.....	21

BUSINESS ADVOCACY WINS MARKETS IN BARBADOS

TOURISM SERVICES LIBERALIZATION UNDER THE CARIBBEAN–EUROPEAN UNION ECONOMIC PARTNERSHIP AGREEMENT

CASE STUDY EXECUTIVE SUMMARY

This case study describes how the private and public sectors of Barbados worked together to ensure the country was able to secure better market access for its tourism service providers and investors under the CARIFORUM-EU EPA.

CARIFORUM is the Caribbean Community (CARICOM), comprised of 15 Caribbean Community states, together with the Dominican Republic. The Economic Partnership Agreements (EPAs) between the European Union and African, Caribbean and Pacific countries are trade promotion agreements that stem from the 2000 Cotonou Agreement, and are tailor-made for specific regional circumstances.

In the EPA negotiations, Barbados achieved a significant measure of success for the tourism sector. This case study gives public officials involved in EPA negotiations a valuable insight into the value of partnership with the private sector. Private sector actors will better understand how the needs of business and of the sector can be brought to the table and yield results.

The case study also demonstrates the importance of public-private collaboration in preparing negotiating positions for international trade negotiations, the processes for effective dialogue and the specific role of the private sector. This case study also provides an analysis of the business opportunities for the Barbados tourism industry under the EPA.

The conclusion of the EPA between the CARIFORUM Group of the African Caribbean Pacific (ACP)¹ states and the European Union represents enhanced and new access opportunities in the EU market for CARIFORUM investors and service providers in the tourism industry. Barbados should be one of the main beneficiaries of these trade gains given the predominance of tourism and tourism-related activities in its economy and the quality of its tourism-related infrastructure.

The EPA's treatment of tourism services is notable for its development cooperation provisions in areas such as capacity building for environmental management, developing

Internet-based marketing strategies for small and medium-sized tourism enterprises, as well as upgrading national accounts systems to introduce tourism satellite accounts at the regional and local level.

The negotiation of a free trade agreement between partners of dramatically different economic sizes and capabilities was no easy task. For success, the smaller negotiating partner – Barbados – needed several elements, including:

- A technically competent negotiating machinery;
- A proactive government providing clear policy guidance on negotiating strategy and positions;
- Effective government communications with the private sector;
- Active private sector involvement based on a sophisticated awareness of the implications of trade policy for their businesses.

A key lesson emerging from the EPA negotiations is that there is an increasingly important role for the private sector in developing countries. Private sector actors are often best placed to identify potential export opportunities, existing barriers and the means to capitalize on the opportunities opened up by trade pacts. A critical element in the negotiation process is ensuring there are avenues for constructive engagement between the private sector and government to best fashion market access requests and offers.

Private and public sector interaction was an essential element in ensuring that the country was able to secure better market access conditions for its tourism service providers and investors under the EPA than those afforded by the World Trade Organization's (WTO) General Agreement on Trade in Services (GATS).

The case study documents the domestic tourism industry's positions, the interaction between stakeholders in the tourism industry and the Government of Barbados and how that interaction helped shape the tourism-related provisions of the EPA. The process involved both national interaction and regional dynamics. Important public-private interactions took place at the regional level among actors such as the

Caribbean Regional Negotiating Machinery (CRNM), the Caribbean Tourism Organization and the Caribbean Hotel and Tourism Association (CHTA).

The CRNM, as far back as 2003, had undertaken much of the preparatory work that enhanced the richness of this interaction. The CRNM is the premier regional body with a technical competence in trade. Barbados' private sector representative agencies reconstituted their research capabilities to meet the challenge of international negotiations. Their preparatory work included:

- Commissioning a seminal study that provided a comprehensive assessment of the issues involved in tourism negotiations;²
- Working with the CHTA and the Caribbean Tourism Organization to sensitize tourism stakeholders about the trade issues through workshops within the region;
- Addressing the CARICOM Ministers of Tourism and the CARICOM Council for Trade and Economic Development;
- In some cases, facilitating increased contact and co-ordination between Ministries of Trade and Ministries of Tourism.

The EPA negotiations represented an opportunity for service suppliers in Barbados and the Caribbean to reap benefits not achieved in the WTO, including:

- Creating meaningful, innovative, market-opening rules for the sector;
- Establishing a common understanding on issues facing the sector, such as in the areas of standards and anti-competitive practices;
- Creating mechanisms to make it easier for EU investors to choose the Caribbean;
- Strengthening the capacity of CARIFORUM operators to increase tourism exports and the industry's competitiveness.

The success of the Barbados tourism stakeholders' campaign to secure new market access opportunities in the EU market can be attributed to:

- Active engagement of the private sector in EPA negotiations;
- Use of business support organizations to convey positions to the Government and the regional authorities;
- Commitment of Government and the private sector to have a constructive and cooperative working relationship throughout the negotiations;
- The ability of negotiators to successfully pursue the interests of private operators.

A SNAPSHOT OF TOURISM IN BARBADOS

Tourism is a mainstay of Barbados' economy and its most important services export.³ Barbados is one of the most

mature Caribbean tourism destinations. The country's tourism industry offers relatively diversified products, including the long-stay visitor market and a growing cruise ship segment. Stakeholders include a wide variety of service suppliers ranging from the lower value-added end to the premium end: car rental and coach operators, aircraft catering, tour guides, travel agents and tour operators, duty-free retailers and a variety of businesses that derive significant revenues from the tourism industry, for example, restaurants, retail shops, etc. Barbados has made significant strides in creating niche tourism markets such as events-focused cultural tourism, heritage tourism, sports tourism and destination weddings.

Barbados faces increasing global competition. In the region, Barbados faces fierce competition from destinations such as Mexico, Cuba, the Dominican Republic and Jamaica. The country's main challenge is to maintain a high-quality tourism product while adding value through the addition of niche markets, such as health and wellness tourism, which build on Barbados' existing capacity base. As Barbados' largest tourism markets are the United Kingdom, the United States and Canada, the industry is particularly vulnerable to economic downturns in any of these countries.

RECENT INDUSTRY PERFORMANCE

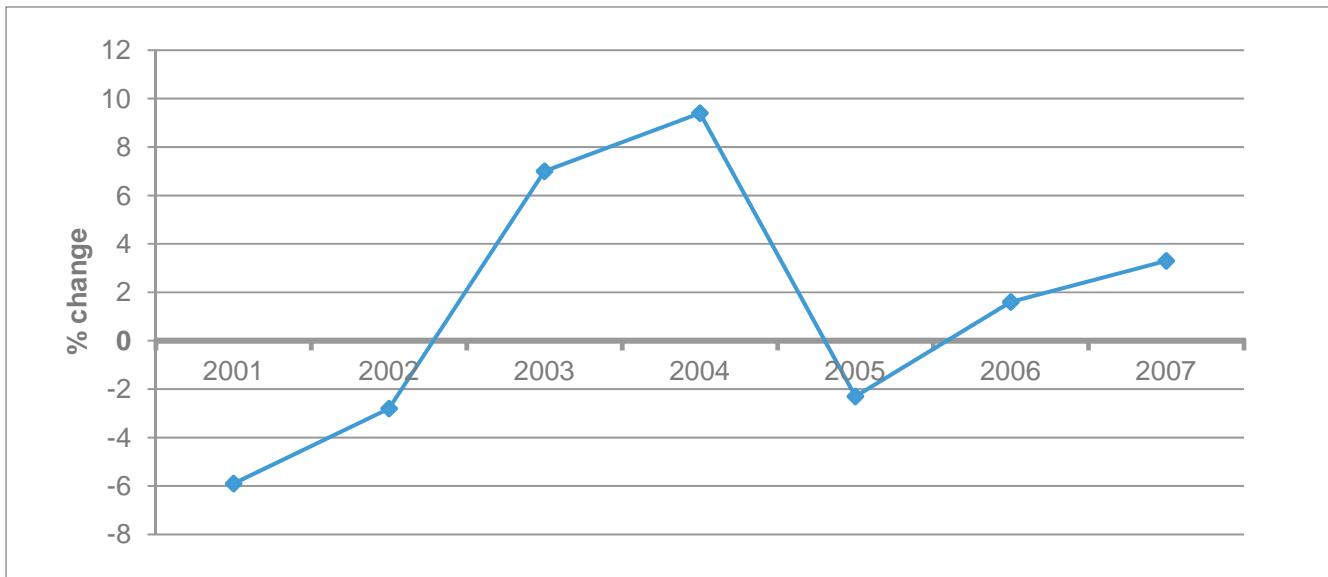
From 2001 to 2007, the industry's real growth rate averaged 1.47%. This slow growth rate is explained by the steep declines experienced in 2001 and 2002 in the aftermath of the 9/11 and 2005 terrorist attacks in the United States and the United Kingdom and by modest rates of growth in 2006 and 2007, following robust growth in 2003 and 2004 (see figure 2).

In 2007, Barbados received 1,189,291 tourist visits.⁴ Long-stay tourists accounted for approximately 48.2% of this total. Long-stay tourist arrival figures were boosted by Barbados' hosting of some matches of the Cricket World Cup in April 2007. This figure represents a 1.8 % increase in long-stay tourist arrivals over 2006. Cruise tourism represents an increasingly important segment of the tourism market, growing by 14.3% in 2007.⁵

The industry earned BDS\$ 763.6 million (US\$ 385.6 million) in 2007, contributing 13.5% of real GDP.⁶ Visitor expenditure in 2007 totalled BDS\$ 2,400.2 million, an increase of 18.5% compared with BDS\$ 1,955.2 million the previous year.⁷ In 2007, the tourism industry directly employed an estimated 14,000, approximately 10.5% of the total labour force.⁸

The United Kingdom is the most important tourism market for Barbados, accounting for 38% of total long-stay tourist arrivals in 2007.⁹ The growth in arrivals from other European countries has been less than impressive. Arrivals from European destinations declined by 25.8% in 2006-2007. Other major tourist markets such as the United States and Canada continue to grow, recording increases of 2.1% and 7.7 %, respectively over the same period.

Figure 2: Real growth rate of the tourism industry, 2001-2007



Source: Based on data from table I.2, *Trade Policy Review: Barbados*, World Trade Organization, 2008.

BUSINESS ADVOCACY GROUPS GET ORGANIZED

Prior to 2003, various business support organizations maintained a limited research capacity in trade and related government policies. The private sector business support organizations initiated a rationalization process. This entailed carving out research capabilities from existing business support organizations and grouping them under a new entity – the Barbados Private Sector Trade Team (PSTT). The PSTT was mandated to research, document and promote private sector interests likely to be affected in international trade negotiations.¹⁰ The main pillars of the PSTT's work include:

- Evaluating the competitiveness of Barbadian businesses;
- Assessing the impact of trade agreements;
- Identifying new opportunities arising from a progressively more liberal international trading environment.

The Barbados Hotel & Tourism Association (BHTA) represents the interests of the private sector's tourism stakeholders. It played a limited role in the overall EPA negotiations, providing support to the PSTT and the regional industry association, the CHTA.¹¹ The BHTA served as a key link between the PSTT, the CHTA and tourism stakeholders.

The BHTA participated in PSTT tourism initiatives and attended meetings of the CRNMs Technical Working Group on Services. The BHTA also used opportunities such as the Commonwealth-sponsored private-public sector consultations in 2004 to make presentations aimed

at sensitizing policymakers about the peculiarities of the tourism industry and to articulate specific market access demands for the EPA, the WTO and the now-abandoned Free Trade of the Americas Agreement.

The PSTT clearly viewed the EPA negotiations as an opportunity for its members to secure new access opportunities for its members in the European market. In its 2006 Information Paper, the PSTT stated:

“Tourism stakeholders in Barbados and the region have requested that CARIFORUM negotiators in their formal discussions with the EU stress the importance of the tourism sector to the economies of the region. Tourism stakeholders in the private sector will be looking to the EPA to address some of the difficulties currently being experienced in the tourism sector.

CARIFORUM countries expect the EPA to provide significant economic benefits to the Caribbean in terms of market access and trade facilitation to enable mainly the small service suppliers in the region to export for the first time and/or increase exports to the EU.”¹²

The PSTT's activities included encouraging tourism stakeholders to lobby for their interests and formulating positions and engaging in consultations with the Ministry of Foreign Trade.

ENGAGING IN STAKEHOLDER ADVOCACY

The PSTT encouraged tourism stakeholders to engage in advocacy to secure their interests. It elaborated a three-phase strategy to heighten the profile of tourism issues.¹³

- The first phase entailed coordinating public and private sectors at the national level. This called for increased private sector involvement in the decision-making process on trade liberalization issues. It placed the onus on the private sector to understand the issues and convey its needs to policymakers and national negotiators.
- The second phase involved organizing the public and private sectors at the regional level by creating opportunities for dialogue at major regional tourism conferences.
- The third phase was organizing regional stakeholders and negotiators at the international level and lobbying for the tourism industry in the multilateral arena.

COLLABORATING AND FORMULATING POSITIONS

The PSTT was an important player in formulating positions for the tourism industry. Together with BHTA, the PSTT facilitated the process of identifying the tourism sector's offensive and defensive interests through a number of focus groups in late 2004. Focus group participants included key tourism stakeholders and a representative from the Ministry of Foreign Trade.

The focus groups aimed at formulating private sector positions on tourism issues for the negotiations with the EU, as well as for upcoming negotiations with Canada and the United States. Sub-sectors that were the subject of these exercises included tour operators, tour guides and travel agents; attraction and recreation services;¹⁴ aircraft catering services; car and coach rental services; and duty-free retail services. The stakeholders took an expansive view of the tourism industry. Their focus groups and subsequent requests included services not classified as tourism services under Central Product Classification (CPC), the worldwide product classification system of goods and services published by the United Nations.

The focus group discussions provided the basis for the national tourism stakeholders' market access requests to the EU. These requests were formally submitted by the PSTT to the Ministry of Foreign Trade to incorporate into Barbados' collective requests and offers (see box 2). The PSTT submission highlighted areas in which Barbadian service providers expressed interest in gaining enhanced access to the European market and requested removal of specific barriers to tourism services exports. PSTT sought market access to the EU in the above-mentioned sectors.

THE GOVERNMENT REACTS FAVOURABLY

The Foreign Trade Division of the Ministry of Foreign Affairs and Foreign Trade appeared to be satisfied with the private sector's initiatives on tourism trade issues. The Ministry found that the business support organizations representing the interests of tourism stakeholders were well informed and had a clear idea of the industry's defensive and offensive interests.

The PSTT's devotion of significant time and resources was reflected in well-researched and structured submissions. As a preliminary step, the Foreign Trade Division in the context of Barbados' EPA initial offers examined the PSTT's submission. CARIFORUM's EPA offer was prepared on the basis of the CARIFORUM states' WTO offers (see box 2 and table 2).

While the PSTT's requests listed in box 2 appear somewhat different from those of CARIFORUM described in table 2, there is actually a high level of consonance between the two. The PSTT's request to remove all limitations to the establishment of commercial presence is equivalent to CARIFORUM's request for the Czech Republic and Poland to remove their restrictions as these were the only two European countries that remained unbound in the EU's conditional revised offer at the WTO. One difference, however, is that CARIFORUM's request did not heed the PSTT's request for the removal of restrictions on the establishment of commercial presence for tour guides services.

THE ROLE OF THE CARIBBEAN HOTEL AND TOURISM ASSOCIATION

Since 1962, the CHTA, sometimes referred to as the Caribbean Hotel Association, has operated as an independent, not-for-profit organization. The CHTA stands out in terms of its active engagement in the negotiation process and its role in coordinating the region's tourism sector. The pivotal role played by the CHTA is explained by the national business support organizations' confidence that CHTA accurately reflected its interests and was able to effectively articulate its demands.

The Barbados tourism industry's perception that the CHTA was a champion of its interests was also rooted in the fact that the PSTT's lead consultant on tourism issues was recruited to the CHTA as its Industry and Advocacy Manager for the EPA negotiations. This contributed to a healthy cross-fertilization of ideas and strong lines of communication among the BHTA, the PSTT and the CHTA. The CHTA's involvement in the EPA negotiations included:

- Submitting a position paper in 2005 and a first draft of a declaration/EPA Annex on tourism in 2006;
- Encouraging the active engagement of its membership in the negotiation process by emphasizing the importance of trade issues for the industry;

Box 2: Highlights of the private sector trade team's market access requests on tourism

Travel agents, tour guides and tour operators

- *Travel agents*
 - Removal of all restrictions on cross-border supply
 - Removal of all restrictions on the establishment of commercial presence
 - Removal of restrictions on the movement of managers and key personnel of CARIFORUM operations as well as independent self-employed travel agents
- *Tour operators*
 - Removal of all restrictions on cross-border supply
 - Removal of all restrictions on the establishment of commercial presence
 - Removal of restrictions on the movement of managers and key personnel of CARIFORUM operations as well as independent self-employed tour operator professionals
- *Tour guides*
 - Removal of all restrictions on the establishment of commercial presence
 - Removal of restrictions on the movement of managers and key personnel of CARIFORUM operations and provide for movement of CARIFORUM tour guides

Lodging, food and beverage services

- *Lodging services*
 - Removal of all restrictions on the establishment of commercial presence
 - Removal of restrictions on the movement of managers and key personnel
- *Food serving services*
 - Removal of all restrictions on the cross-border supply of catering services, including aircraft catering operations
 - Removal of all restrictions on the establishment of commercial presence, including aircraft catering operations
 - Removal of restrictions on the movement of managers and key personnel

Source: Submission of the Private Sector Trade Team to the Foreign Trade Division, 25 August 2005.

Box 3: WTO modes of supply

In terms of market access, the WTO distinguishes between the following four modes of services supply:

- **Cross-border supply (Mode 1)** covers services flows from one customs territory into another. Typical examples are services transmitted via telecommunications or mail.
- **Consumption abroad (Mode 2)** refers to situations where consumers move into another customs territory to obtain services, as predominantly the case in the tourism sector.
- **Commercial presence (Mode 3)** implies that a service supplier establishes a territorial presence in another customs territory to provide a service, as for example in the case of hotel chains.
- **Presence of natural persons (Mode 4)** consists of persons entering a foreign customs territory to supply a service, as independent self-employed tour operators may do on occasion.

- Polling members to gauge their views on particular issues;
- Participating in the Caribbean Regional Negotiating Machinery Technical Working Groups in Barbados and Jamaica.

EPA tourism negotiations hit a low point in late 2007.¹⁵ This deadlock seems to have been caused by opposing views on the necessity of including separate and distinct disciplines for the tourism industry within the EPA. While CARIFORUM was firmly committed to including such disciplines, EU negotiators appeared to deem them unnecessary. The CHTA waged a public relations campaign highlighting the importance of the tourism industry to the region and generating some negative press for the EU, especially in light of the significant asymmetries in the size and power of the two regions.

The CHTA considers its campaign as one of the factors contributing to the modification of the EU's stance on tourism issues. While the deadlock was eventually resolved at the level of Chief Negotiators, this anecdote illustrates that there is a unique role for private sector actors in negotiations. Neither the CARIFORUM governments nor the CRNM could have orchestrated such a media campaign without prejudicing the negotiations.

The CHTA's 2005 position paper articulated market access-related demands in three areas:

- Negotiation of a mutual recognition agreement (MRA) with the EU to recognize and accept tourism qualifications and credentialing programmes.
- Enhancement of access to the EU for the temporary entry of tourism professionals of all levels, as well as for Caribbean hospitality students seeking access to temporary work experience (Mode 4). Such access was also sought for skilled and semi-skilled workers in the culinary, food and beverage sub-sector.
- Improved access to the EU market through cross-border supply (Mode 1) of tourism services through a review of EU legislation and standards applicable to Caribbean hoteliers while cooperating with European tour operators.¹⁹

Mode 1 encompasses direct marketing of CARIFORUM-based hotel services via their own Internet platforms and indirect marketing through Computer Reservation Systems, such as Amadeus, Sabre, Galileo and Worldspan. It also includes online booking engines and Internet portals, including Hotels.com, Expedia and Travelocity.

Currently, the number of bookings made directly with Caribbean hotels is small. Computer Reservation Systems, online booking engines and Internet portals are the main distribution channels for the tourism products. These are controlled by a few big international companies. As a result, under Mode 1, CARIFORUM hotel service providers' have primarily indirect access to EU tourist markets. Actual access to the EU market may be restricted by the requirements of the few key distributors.

Obtaining a Mode 1 commitment for hotels would mean that the EU would not maintain any market access barriers to CARIFORUM operators selling their services directly or indirectly in the EU market via electronic media. Given the marketing trend described above, the immediate consequence would be to remove barriers that may arise because of the dominance of the international booking agencies.

With a Mode 1 commitment, there would be a legal basis on which to challenge barriers to marketing CARIFORUM tourism services. This should be considered in conjunction with the anti-competitive provisions in the EPA, which address the question of global suppliers that have the capacity to materially affect the CARIFORUM operator's ability to participate in the market. This market access plus the anti-competition provisions would provide CARIFORUM with a stronger basis to compete against unfair practices such as exclusivity clauses.

In the absence of a commitment,²⁰ there is no legal basis for contesting Mode 1 barriers to market access. Hence, it is more difficult to make inroads into the market on the basis of access only via CARIFORUM's own Internet marketing.

It is important to note that the EU Package Travel Directive applies to the CARIFORUM hotels, whether they market their services directly or indirectly to the EU

Table 2: Main elements of the CARIFORUM access requests on tourism

Sector	Request to EU Member States by mode of supply
Hotels and restaurants including catering services CPC 641-643 ¹⁶	Mode 3: Remove limitations for Czech Republic and Poland for CPC 643 Remove national treatment restriction for the Economic Needs Test in Italy for CARIFORUM providers Mode 4: Remove limitations for all Member States
Travel agencies and tour operators services CPC 7471 ¹⁷	Modes 1, 3, 4: Remove limitations for all Member States
Tourist guides services	Mode 4: Remove limitations for all Member States ¹⁸

Source: CRNM, CARIFORUM Request to the European Communities.

market. As indicated, the way in which some EU Member States have implemented the Directive appears to have been a barrier to Mode 1 access. In getting a Mode 1 commitment, CARIFORUM states may put the onus on the EU Member States to ensure that the implementation of the Directive does not create a barrier to Mode 1 access.

These demands, along with the other concerns of the tourism stakeholders, were also incorporated into the CHTA/Caribbean Tourism Organization's draft text on tourism.

A BETTER LANDSCAPE FOR TOURISM SERVICES

The conclusion of the EPA between CARIFORUM and the EU represents enhanced and new access opportunities in the EU market for CARIFORUM investors and service providers in the tourism industry. Barbados stands to be among the main beneficiaries of these trade gains, given the predominance of tourism and tourism-related activities in its economy and the quality of its related infrastructure.

The Barbados private and public sector interaction was an essential element in ensuring that the country was able to secure better market access conditions for its tourism service providers and investors under the EPA than those afforded by the World Trade Organization's GATS.

Both national interaction and regional dynamics took place. Regional actors included the CRNM, the Caribbean Tourism Organization and the CHTA.

MARKET ACCESS GAINS

In the EPA negotiations that concluded in December 2007, the EU made a number of commitments in the tourism and travel-related services sector, namely in regard to hotels and restaurants, catering services, travel agencies, tour operators and tourist guide services (see table 3). Some commitments were made for spa services as well as for other services not classified as tourism services, but nonetheless of interest to Barbados' tourism services providers.²¹

The market access gains are discussed below in terms of the four specific modes of supplying tourism services.²²

The areas covered by the EPA are 'shared competences' between the EU and the Member States. As a result, not all areas have been liberalized homogeneously in the EPA. A number of EU Member States opted out with regard to specific supply modes in certain sectors.

CROSS-BORDER SUPPLY AND CONSUMPTION ABROAD OF SERVICES (MODES 1 AND 2)

The EU Member States were liberal in their commitments on the provision of catering services through Mode 1, removing

all market access restrictions. However, a closer inspection of the EU's Mode 1 commitments suggests this gain may be of limited value given the practical difficulty of supplying catering services via Mode 1.²³ The EU's commitments for hotels and restaurants reflect a far more restricted access regime. Estonia, Finland and Hungary have removed their restrictions; the remaining 24 EU Member States remain unbound.

CARIFORUM suppliers secured additional market access for the Mode 1 cross-border supply of travel agency and tour operator services, with only Bulgaria and Hungary opting to maintain their restrictions. For tourist guide services, 17 Member States removed their market access limitations, while Bulgaria, Cyprus, the Czech Republic, Hungary, Italy, Lithuania, Malta, Poland, Slovakia and Slovenia remain uncommitted.

The EU places no limitations on Mode 2 trade (consumption abroad) for any of the three tourism categories or for spa services. As a result, Europeans can use these tourism and spa services freely in CARIFORUM countries. However, such commitments are of limited value as there were no barriers to start with. CARIFORUM had sought to add value to these commitments by requesting the portability of state funded medical insurance benefits so that the costs of medically mandated spa treatments are eligible for reimbursement for EU citizens. However, this request met with little success as EU negotiators considered such insurance schemes to lie beyond the scope of the EPA.

COMMERCIAL PRESENCE (MODE 3)

The EU provided substantial market access for establishing CARIFORUM commercial presence in tourism services. For hotel, restaurant and catering services, all EU Member States except Bulgaria and Italy have no restrictions on commercial presence. Bulgaria requires incorporation and Italy imposes economic needs tests.

For travel agency and tour operator services, only Bulgaria and Portugal maintain limitations requiring incorporation or maintenance of the firm's corporate base in the host country. There are no limitations on commercial presence in any EU Member State for tourist guides services. In addition, there are no restrictions on spa services.

TEMPORARY PRESENCE OF NATURAL PERSONS FOR BUSINESS PURPOSES (MODE 4)

The EU has committed to allowing investors to engage key personnel and graduate trainees for every service sector liberalized under the EPA, subject to some country specific limitations. The temporary entry and stay of key personnel and graduate trainees will be for up to three years for intra-corporate transfers, 90 days in any 12-month period for business visitors, and one year for graduate trainees. Only Bulgaria has maintained limitations in these categories. In Bulgaria, the number of foreign managers cannot exceed

Table 3: Highlights – Tourism market access commitments to CARIFORUM in the EPA

Sub-sector	EPA commitments (Number of EU Member States)														
	Full					Partial					Unbound				
	Sub-sector modes					Sub-sector modes					Sub-sector modes				
	1	2	3	4 ^a	4 ^b	1	2	3	4 ^a	4 ^b	1	2	2	4 ^a	4 ^b
Hotels and restaurants	3	27	25	26	0	0	0	2	1	0	24	0	0	0	27
Catering	27	27	25	26	0	0	0	2	1	0	0	0	0	0	27
Travel agencies	25	27	25	26	14	0	0	2	1	12	2	0	0	0	1
Tour operators services (Including tour managers)	25	27	25	26	14	0	0	2	1	12	2	0	0	0	1*
Tourist guides services	17	27	27	15	1	0	0	0	12 (=0)	21	10	0	0	0	5
Spa services	0	27	27	0	0	0	0	0	27 (=0)	0	27	0	0	0	27

Source: Annex IV.A, IV.B, IV.C and IV.D of the CARIFORUM-EU EPA.

Explanatory Notes: 4^a – Key Personnel and Graduate Trainees; 4^b – Contract Service Suppliers (CSS); (=0) – Partial access negated by nationality requirement; * Ireland is unbound except for tour managers.

that of local managers where the state/municipal share in equity in a Bulgarian company is greater than 50%.

With respect to tour guides services, 15 Member States removed their limitations to the movement of these professionals. The other 12 Member States have maintained nationality requirements that nullify the partial access otherwise granted. Nationality requirements also apply to key personnel and graduate trainees across the EU for spa services.

As regards commitments on contractual service suppliers, the EU remains unbound for hotel, restaurant and catering services as well as for spa services. The EU was more liberal for travel agency services: 14 Member States scheduled no limitations for this category of professionals, 12 Member States applied economic needs test and Ireland remained unbound.

A similar picture emerges for tour operator services including tour managers, although Ireland has made a commitment to allow contractual service suppliers entry solely for tour managers. For tour guides services, there is a much lower level of commitment. Only Sweden agreed to remove its market access limitations, whereas 21 Member States impose economic needs tests and the remaining five have not undertaken any commitments. The EU did not make an offer on the temporary entry of independent professionals in any of the three tourism sub-sectors.

A MARKET ACCESS SCORECARD

COMMITMENTS VS. DEMANDS

Comparing the PSTT's requests to the results in the EPA, it is clear that Barbados' tourism stakeholders secured much of what they sought to achieve.²⁴

For catering, travel agency, tour operator and tour guide services, the EU Member States provided a significant level of Mode 1 access with the level of commitments ranging from as high as all 27 Member States to a low of 17.²⁵ This was clearly a favourable outcome for Barbados' service providers. The PSTT had not requested any Mode 1 market access commitments for hotel services, as these were not considered to be technically or commercially feasible. With respect to food serving services, the PSTT's request was limited to catering services (CPC 6423). As a result, the lack of EU commitments for restaurant services is presumably not problematic.

In terms of the commercial presence commitments, the EU was very liberal with 25 Member States making commitments in all of the scheduled tourism sub-sectors as well as for spa services. Barbadian tourism service providers can be relatively content on this score. While the PSTT had included aircraft catering in its general catering services request, such a service is properly classified as a service auxiliary to air transport services.²⁶ In its commitments in the latter sub-sector, the EU scheduled a reservation limiting categories of activities to the size of the airport, stipulating that the number of providers in each airport can be limited due to space constraints, but they have to be at least two to maintain some competition. In addition, Bulgaria imposed an incorporation requirement. From the PSTT's perspective, such access, even if limited, is a positive outcome.

As measured against its requests, Barbados gained significant market access for key personnel and graduate trainees in the hotel, restaurant and catering services sectors, as well as travel agency and tour operator services, with 26 Member States making full commitments; Bulgaria scheduled a partial commitment. In terms of the gains on contractual service suppliers, the PSTT only requested that the EU allow temporary entry of tour guides. There was some measure of success as Sweden fully opened its

market while 21 Member States made entry subject to an economic needs test.

Particularly useful were the significant gains made for entry of travel agency and tour operator contractual service suppliers. These gains should not be underestimated because market access provides CARIFORUM service suppliers the opportunity to compete with vertically integrated suppliers in the European market.

On the question of enhanced Mode 4 access, especially as it relates to professionals in the culinary, food and beverage sub-sector, the EU significantly satisfied these demands. As to enhanced temporary entry privileges for hospitality students, such students are unlikely to meet the criteria for graduate trainees. Nevertheless, an effort was made to address CARIFORUM's request by including development assistance for tourism exchange programmes and training.²⁷ This represents a novel approach to permit some form of mobility for this category of persons.

MUTUAL RECOGNITION

Regarding negotiation of a MRA for tourism service providers, under the EPA: 'The Parties shall cooperate towards the mutual recognition of requirements, qualifications, licences or other regulations in accordance with Article 85...' ²⁸ Article 85, which deals with mutual recognition more generally, reaffirms the Parties' right to require that natural persons possess the necessary qualifications and/or professional experience to supply covered services and commits the Parties to encourage the relevant professional bodies in their respective territories to jointly develop and provide recommendations on mutual recognition. Tourism is identified as one of the priority sectors for the development of mutual recognition arrangements under the EPA.²⁹ The EPA specifically mandates the EU and CARIFORUM to encourage their relevant professional bodies to start negotiations three years after the EPA's entry into force to jointly develop and provide recommendations on mutual recognition.

The CHTA's desire for improved Mode 1 access through a review of national legislation implementing the EU Package Travel Directive³⁰ is, to some extent, addressed in Article 116 of the EPA. It stipulates that the Parties are to encourage compliance with environmental and quality standards applicable to tourism services in a reasonable and objective manner, without constituting unnecessary barriers to trade.

An additional avenue for addressing issues such as those arising out of the EU Package Travel Directive is the consultative mechanism for regular dialogue on tourism-related issues to be established under Article 118 of the EPA. The exact modalities for the exchange of information and consultation between the Parties and other relevant stakeholders have not been spelled out in the EPA, but are to be developed by the CARIFORUM-EU Trade and Development Committee.

An adequate assessment of the market access gains from the EPA requires some discussion of the EPA's novel tourism-specific competition disciplines and the provisions on trade-related capacity building. Both strengthen CARIFORUM's supply-side capacity and increase the region's chances of exploiting new and enhanced market access opportunities flowing from the EPA.

COMPETITION POLICY DISCIPLINES

Initially, CARIFORUM had proposed to include a tourism annex in the EPA. The origin of this idea seems to have been the proposal to the WTO Doha Round of trade negotiations submitted by Latin American countries in 2001.³¹ This proposal was the inspiration for the draft text on tourism formulated by the CHTA and adopted by the CRNM in the EPA negotiations. However, the EU resisted including the annex precipitating a deadlock in the services negotiations. The EU then presented its own draft text and the parties were subsequently reached a compromise.

One important element of the WTO Doha Round proposal that the CHTA and Tourism Association included in its EPA draft was the creation of a competitive safeguard for tourism.³² The inclusion of disciplines on anti-competitive practices was important to CARIFORUM Member States because the global tourism industry is characterized by vertically integrated market structures and consolidated distribution channels controlled by a limited number of large international players, many based in the EU.³³

Article 111 of the EPA requires the parties to maintain or introduce measures to prevent suppliers from materially affecting 'the terms of participation in the relevant market for tourism services by engaging in or continuing anti-competitive practices, including, inter alia, abuse of dominant position through imposition of unfair prices, exclusivity clauses, refusal to deal, tied sales, quantity restrictions or vertical integration'.

The EPA provision on the prevention of anti-competitive practices is legally binding.³⁴ This is also the case for the provisions on mutual recognition and development cooperation. Perhaps the EU's acceptance of these stronger provisions was linked to its objective to include a most favoured nation (MFN) clause, which extends any preference granted by CARIFORUM Member States to a major trading country to the EU³⁵ as well as to the EU's desire to have sector specific disciplines on service industries, such as e-commerce, telecommunications, courier, maritime transport and financial services. Within the meaning of the EPA MFN clause, a major trading economy is every developed country or any country accounting for a share of world merchandise exports above 1% or any group of countries accounting collectively for 1.5% during the year before, according more favourable treatment to the third party.

TRADE-RELATED CAPACITY BUILDING

The EPA's treatment of tourism services is also notable for its development cooperation provisions. The EPA contains an explicit commitment by the EU to help advance the tourism sector in the CARIFORUM Member States and sets out a non-exhaustive list of specific areas in which the parties agree to cooperate. These areas includes capacity building for environmental management, developing Internet-based marketing strategies for small and medium-sized tourism enterprises, as well as upgrading national accounts systems to introduce tourism satellite accounts at the regional and local level.³⁶

CONCLUSION

The EPA negotiations represented an opportunity for service suppliers in Barbados and the Caribbean to reap benefits not achieved in the WTO, including:

- Creating meaningful, innovative, market-opening rules for the sector;
- Establishing a common understanding on issues facing the sector, such as in the areas of standards and anti-competitive practices;
- Creating mechanisms to make it easier for EU investors to choose the Caribbean;
- Strengthening the capacity of CARIFORUM operators to increase tourism exports and the industry's competitiveness.

The EPA's treatment of tourism services is notable also for its development cooperation provisions in areas such as capacity building for environmental management, developing Internet-based marketing strategies for small- and medium-sized tourism enterprises, as well as upgrading national accounts systems to introduce tourism satellite accounts at the regional and local level.

The EPA's tourism provisions built upon and incorporated elements of proposals on tourism made in the Doha Round of trade negotiations, including those sponsored by the Dominican Republic and other WTO Members in 2000 and 2001. This illustrates the iterative nature of the relationship between multilateral and regional trade initiatives

The region's positions on international trade in tourism services coalesced through preparatory consultations across CARIFORUM Member States and through direct input from the region's tourism and hotel associations and other key stakeholders. CARIFORUM countries successfully advanced their position in the negotiations, leading to adopting groundbreaking provisions on tourism in the EPA and creating a common understanding on tourism-related disciplines among almost a third of the WTO membership.

The success of the Barbados tourism stakeholders' campaign to secure meaningful new market access opportunities in the EU market can be attributed to the engagement of the private sector in the negotiations process to secure its stated market access aims.

Here, well-organized business associations articulated their collective interests; the Barbadian Government endorsed greater public-private collaboration and was open to the views of the private sector; and negotiators were skilled in pursuing the interests of private operators.

This latter point should not be underestimated. The competence of the region's negotiators was a major element in the securing of these advances. The CRNM proved to be an adept intermediary between the region's private sector and the EU negotiators.³⁷

The CRNM has proven to be a unifying thread in the tapestry of the Barbados tourism success story. It has participated in regional-national collaboration at the industry level by partnering with the CHTA and Caribbean Tourism Organization to sensitize national business support organizations. In this regard, the CRNM provided the analytical and conceptual framework within which the other actors identified their interests, assessed their options and formulated their positions.

Major tasks ahead for private operators in Barbados are to ensure that all stakeholders recognize the new and enhanced market access opportunities flowing from the EPA and strategically position themselves to tap into newly opened EU markets. Two parallel initiatives, one by the private sector and another from the Government, suggest that such a process is underway.

On the private sector side, the CHTA is preparing a guide for tourism industry stakeholders explaining in user-friendly terms how they can benefit from the EPA and from the liberalization commitments undertaken by CARIFORUM governments. The CHTA is also seeking funding to finance a road show to promote the market access gains realized under the EPA and the opportunities for targeted development assistance and technical support.

The Government is moving forward with plans to establish an EPA Implementation Unit that will support all industries in benefiting from the development assistance provided under the EPA.

This case study illustrates that the private sector in developing countries, including in small and vulnerable economies, can reap significant rewards from adopting a proactive approach to – and early engagement in – trade negotiations. Benefits can be derived from influencing the nature and substantive content of agreed provisions and the level of commitments undertaken by negotiating partners.

ENDNOTES

1. CARIFORUM refers to the 14 Member States of CARICOM (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname and Trinidad and Tobago) plus the Dominican Republic.
2. A. Dunlop, *Tourism Services Negotiations Issues: Implications for CARIFORUM Countries*, (Caribbean Regional Negotiating Machinery, Office of Trade Negotiations, Caribbean Community (CARICOM) Secretariat, 2003). Available at: <http://www.cnm.org>.
3. *Trade Policy Review: Barbados* (Report of the Secretariat, World Trade Organization, WT/TPR/S/203, p. 8, 2008).
4. *Barbados Economic and Social Report 2007* (Ministry of Finance, Economic Affairs and Energy, pp. 59-60, July 2008).
5. *Ibid*, p. 60.
6. *Barbados Economic and Social Report 2007*, (Ministry of Finance, Economic Affairs and Energy, p. 20, 2007).
7. *Ibid*, p. 59.
8. *Statistical Service Labour Force Survey* (Barbados Statistical Service, 2006 and 2007).
9. *Barbados Economic and Social Report 2007* (Ministry of Finance, Economic Affairs and Energy, p. 60).
10. http://www.tradeteam.bb/cms/default.asp?V_DOC_ID=1056.
11. According to the Caribbean Hotel and Tourism Association's website, the organization represents the entire spectrum of the hospitality industry's private sector including 36 national hotel associations across the Caribbean region, over 850 hotel members and more than 600 supplier companies. See: <http://www.caribbeanhotelandtourism.com/index.php>.
12. *What does the EPA have to do with Tourism?* (Barbados Private Sector Trade Team (PSTT), Information Paper 1, April 2006). Available at: <http://www.tradeteam.bb/cms/pstt/files/sector/tourism/What%20does%20an%20EPA%20have%20to%20do%20with%20Tourism.pdf>.
13. *Need for Tourism Lobbying* (PSTT). Available at: <http://www.tradeteam.bb/cms/pstt/files/tradenews/Need%20for%20Tourism%20Lobbying.pdf>.
14. It is unclear what the PSTT considers to be attraction services. In the document, Submission on the Liberalization of Attraction and Recreation Services, reference is made to a range of sectors and services. These include recreational, cultural and sporting services, entertainment services as well as chartering day/party/pleasure cruises and spa/medical/health services.
15. Perhaps the EU considered that the general services provisions in addition to the competition policy framework in Title I, Chapter 1 would suffice to address the concerns of the CARIFORUM states. See Caribbean Hotel and Tourism Association, 'CHA Reacts to Recent Developments in EPA Negotiations,' Press Release, 28 September 2007. Available at http://caribbeanhotelandtourism.com/downloads/Press_092807_EPA negotiations.pdf; CHA let down by EU, Nation News, 2 October 2007; Jessop, D., 'Grasping the full economic impact of Caribbean tourism,' Jamaica Gleaner, 23 September 2007.
16. Services included are (CPC 641) hotel and other lodging services; (CPC 642) food serving services; and (CPC 643) beverage serving services for consumption on the premises. As a result, Mode 3 for this sector would include establishing a hotel, motel, holiday camp, restaurant, catering business, bar, café, etc., in any EU Member State. Mode 4 covers temporary entry visas for staff members of companies that have established a commercial presence. This could include transferring key personnel (e.g., managers) or graduate trainees to work in the business for up to three years, or sending senior staff responsible for setting up the business for up to 90 days. For more information on CPC 641-643, see <http://unstats.un.org/unsd/cr/registry/regcs.asp?Cl=9&Lg=1&Co=64>. PSTT requested that the Czech Republic and Poland remove limitations for beverage serving services (CPC 643). These limitations have been removed as indicated in table 2. PSTT requested Italy to remove its requirement for an economic needs test for new bars, cafes and restaurants. However, this request was rejected, as indicated in table 2. PSTT requested all EU Member States to remove limitations for movement of staff. This request was not entirely accepted as Bulgaria retains some requirements regarding foreign managers not outnumbering Bulgarian managers for certain types of companies. (Mode 4a.) As far as limitations on contractual service suppliers in the hotel sector, none of the EU Member State has agreed to the request.
17. For this services, Mode 1 includes supplying travel information and booking services online or by telephone; Mode 3 includes establishing a branch office/agency in an EU Member State; and Mode 4 includes transferring company staff to establish and run a branch office in an EU Member State. PSTT requested that all limitations for Modes 1, 3 & 4 be removed.
This was not entirely agreed, as indicated in table 2:
Mode 1 – All EU Member States, except Bulgaria and Hungary, removed limitations.
Mode 3 – Bulgaria and Portugal retain some requirements about companies needing to incorporate in the country. All other EU members removed limitations to setting up a branch office.
Mode 4 – Bulgaria retains a requirement regarding foreign managers not outnumbering Bulgarian managers (and some of general reservations across all sectors may apply).
18. PSTT requested all limitations be removed. However, some EU Member States retained a 'nationality condition' as indicated in table 2.
19. According to the Caribbean Hotel and Tourism Association: 'National provisions implementing the EU Package Travel Directive have resulted in the application of standards which are inappropriate for the Caribbean climate and the location, design and architecture of Caribbean hotels. For example, some CARIFORUM properties have to introduce elaborate evacuation systems more suited to high-rise buildings when they have only two or three floors. The large cost of compliance has been a major issue for CARIFORUM hoteliers.' 'The Position of the Caribbean Hotel Association (CHA) on the Treatment of Tourism within the Economic Partnership Agreement with Europe', Caribbean Hotel and Tourism Association, April 2005.
20. Eventually, this proved to be the case for the most part with respect to the Mode I supply of hotel services as only three EU Member States took full commitments.
21. Because the scope of this case study is limited to tourism services, it does not cover other market access gains of interest to the tourism stakeholders in entertainment services; business services; and recreational, cultural and sporting services.
22. This discussion of market access gains benefits from the Caribbean Regional Negotiating Machinery's Brief, 'Treatment of Tourism in the EPA', 3200.3/EPA-09[08], Kingston/Christ Church, Caribbean Regional Negotiating Machinery, 2008.
23. Airline catering services are a likely exception to this observation. However, these services are classified as services auxiliary to air transport and not included in the tourism services sector.
24. The Barbados stakeholders' requests were for the most part incorporated into the regional market access requests. While the discussion is framed mostly in terms of gains achieved by the Barbados tourism stakeholders, this is a somewhat artificial approach as the EU responded to a consolidated CARIFORUM market access request and not to the requests of the Barbados tourism services suppliers.
25. The market access granted by the EU is still significant even with 10 Member States remaining unbound. Tourism receipts for these 10 countries (Bulgaria, Cyprus, Czech Republic, Hungary, Italy, Latvia, Malta, Poland, Slovakia and Slovenia) in 2006 represented only 21.89% of the EU-27's total. The remaining 17 countries, which have removed market access restrictions, account for almost 80% of the total receipts. See European Commission, Eurostat Pocketbooks: Tourism Statistics, p. 33, European Commission 2008.
26. The aircraft catering services sub-sector is important because a Barbadian firm has developed expertise in this area and has expanded operations in Central and South America and other parts of the Caribbean.
27. CARIFORUM-EU EPA, Article 117 (2)(e) provides for tourism exchange programmes and training, including language training for tourism services providers.
28. CARIFORUM-EU EPA, Article 114.
29. CARIFORUM-EU EPA, Article 85 (3).

30. The EU's Directive 90/314/EEC on Package Travel, Package Holidays and Package Tours, 'is designed to protect consumers who contract package travel in the EU. It covers the sale of a pre-arranged combination: Consumers are covered where, at least, two of these elements are sold or offered for sale at an inclusive price and the service covers a period of more than twenty-four hours or includes over-night accommodation'. The Directive contains, inter alia, rules concerning the liability of package organisers and retailers, who must accept responsibility for the performance of the services offered. The EU Package Travel Directive is available at: http://ec.europa.eu/consumers/cons_int/safe_shop/pack_trav/index_en.htm.

31. 'Communication by Bolivia, Dominican Republic, Ecuador, El Salvador, Honduras, Nicaragua, Panama, Peru and Venezuela: Draft Annex on Tourism', S/CSS/W/107, World Trade Organization, 26 September 2001.

32. The EU's reaction to Dominican Republic's Doha Development Agenda proposal was to support the main intentions of the proposal, while not explicitly endorsing the Tourism Annex to the GATS. However, the EU signaled that two issues in the draft – tourism and sustainable development and competitive safeguards – merited further consideration. See: Dunlop, A., Tourism Services Negotiations Issues: Implications for CARIFORUM Countries, Caribbean Council, Caribbean Regional Negotiating Machinery, Office of Trade Negotiations, Caribbean Community (CARICOM) Secretariat, 2003. Available at: <http://www.crnmm.org>.

33. 'The Treatment of Tourism in the CARIFORUM-EU Economic Partnership Agreement', p. 2, Caribbean Regional Negotiating Machinery.

34. By contrast, the other provisions in the Section 7, which addresses the tourism sector, are non-binding. Sauvé and Ward explained this combination of binding and non-binding provisions as being reflective of the dynamics of negotiations. By most accounts, most of the tourism provisions, which were formulated with the active participation of the CARIFORUM members' private sector, were resisted by the EU. Hence, it seems that the priority for CARIFORUM states was to ensure that the key provisions relating to anti-competitive behaviour, mutual recognition and development co-operation were made legally binding. See Pierre Sauvé and Natasha Ward, 'The CARIFORUM-EC Partnership Agreement: Assessing the Outcome on Services and Investment.' ECIPE Discussion Paper. Brussels: European Centre for International Political Economy. Forthcoming.

35. CARIFORUM-EU EPA, Article 70: 1 (b) and 79: 1 (b).

36. A Tourism Satellite Account (TSA) is a statistical instrument to analyse the economic importance of tourism. According to the European Commission: 'A complete TSA contains detailed production accounts of the tourism industry and their linkages to other industries, employment, capital formation and additional non-monetary information on tourism'. More information: <http://statistics.unwto.org/en> and http://ec.europa.eu/enterprise/sectors/tourism/cooperation/tourism-satellite-account/index_en.htm.

37. CARIFORUM's capacity to negotiate a comprehensive EPA was enhanced by the region's already acquired experience in negotiating trade issues in several fora. The negotiation of the CARICOM-Dominican Republic Free Trade Agreement provided insights on existing barriers to trade in the CARIFORUM region and clear indications of what the future liberalization agenda should look like within the sub-region. Negotiations on the ill-fated Free Trade Area of the Americas exposed CARIFORUM negotiators to a wider range of trade issues. These processes, together with experience gained in multilateral negotiations at the WTO, contributed to improving the region's negotiating skills and boosted the region's comfort level in dealing with many of the policy areas, old and new, that became subject to EPA negotiations. For a more in depth discussion, see: P. Sauvé, N. Ward, *The CARIFORUM-EC Partnership Agreement: Assessing the Outcome on Services and Investment*, European Centre for International Political Economy, January 2009. Available at: <http://www.ecipe.org/>.



CHAPTER II

BOOSTING EXPORT COMPETITIVENESS IN GHANA

A SUCCESSFUL PUBLIC-PRIVATE PARTNERSHIP FOR INTEGRATED CUSTOMS SERVICES

CASE STUDY EXECUTIVE SUMMARY	26
INNOVATIVE TRADE FACILITATION	27
OVERCOMING CHALLENGES	28
MAKING LEGAL AND REGULATORY CHANGES	29
OPERATING THE PROJECT.....	30
PROJECT ACHIEVEMENTS	32
SUCCESS FACTORS	33
IMPLEMENTATION CHALLENGES.....	36
CONCLUSION	37

BOOSTING EXPORT COMPETITIVENESS IN GHANA

A SUCCESSFUL PUBLIC-PRIVATE PARTNERSHIP FOR INTEGRATED CUSTOMS SERVICES

CASE STUDY EXECUTIVE SUMMARY

Public-private partnerships (PPPs) offer mechanisms enabling private sector groups and business associations to play a greater advocacy role in formulating and implementing policy. PPPs can also deliver infrastructure and services projects in a more economically efficient and sustainable manner.

This case study showcases Ghana's success in implementing a PPP – the Ghana Community Network Services Limited (GCNet) – to integrate and improve customs operations. The GCNet project highlights the importance of private sector participation in creating an enabling business environment for economic growth. The strategic partnership of a multinational company – Société générale de surveillance (SGS) – was a major contributing factor to the project's success.

SGS is a global company with substantial financial resources to finance the project. Through its trade inspection and verification services, SGS was seen as having adequate experience in trade facilitation and revenue enhancement programmes. SGS' TradeNet is an Integrated Trade Community Network, which was initially developed in Singapore in the 1990s. Since its inception, the system has continuously evolved and TradeNet Singapore today handles more than 20 million files per year and has become a model around the world.

Software applications for government use rarely succeed if they are implemented as one-time events without continuous operational support and infrastructure management. The TradeNet concept is based on the understanding that the software is a tool that needs robust continuous support to deliver its full potential. The software evolves with time and users must be appropriately trained to use it. TradeNet is a flexible, modular system that is highly customized to suit the needs of a particular country taking into consideration existing assets and local trade particularities.

Through the PPP, a team comprised of representatives from the public and private sectors established a joint venture company to manage the project, reviewed and streamlined the procedures, trained 1,500 people, and implemented the necessary infrastructure.

The TradeNet system reduces clearance time, increases customs revenues, reduces errors due to multiple data entry, increases transparency, and boosts consistency in processes. In Ghana, the GCNet project achieved stakeholder goals, which included:

- Simplifying customs procedures;
- Clearing goods faster;
- Facilitating quicker transit with a satellite tracking system;
- Increasing revenue collection;
- Improving the competitiveness of Ghanaian exports.

The competitiveness of Ghana's exports was significantly improved, particularly for small and medium-sized firms, due to the expeditious processing of export consignments as well as the issuing of electronic permits and certificates of origin and transmitting them to the export destination authorities. Clearance time immediately decreased from weeks to hours and government revenue through import duties increased by 35%. Statistics from 2007 indicated that TradeNet handles just under a million files per year and interconnects 800 users across the country.¹

The World Bank-International Finance Corporation (IFC) *Doing Business Report 2007-2008*, which ranks 178 economies for the regulatory ease of doing business, recognized Ghana to be one of the most improved countries. The IFC acknowledged that the GCNet system was one of the major contributing factors to the improvement. Both the World Bank and the World Customs Organization have recognized GCNet as an example to follow in the region.

The PPP drove the successful implementation of the project, however, a number of other critical factors also contributed to its success, including:

- Government support and belief in the project;
- Credible partners;

- Developing specific project infrastructure;
- Phased-in project implementation;
- Tangible manifestations of success;
- Training, sensitization and capacity building;
- Responding to emerging trends and urgent requirements;
- Sustainable self-financing.

The use of a PPP to achieve export impact makes the case study replicable in other countries. ITC, in partnership with GCNet, has produced this case study to share best practices that led to significantly improved export competitiveness. It describes Ghana's experience in initiating the partnership, including choosing the right partners, critical success factors, operational aspects, and how the major challenges were overcome. GCNet has brought the country closer to achieving Ghanaian President John Kufuor's vision, expressed in his inaugural address in January 2001, to create a 'Golden Age of Business for Ghana'.

INNOVATIVE TRADE FACILITATION

PPPs have become a useful medium for implementing projects or delivering services traditionally provided by the public sector in a more economically-efficient and sustainable manner.²

The Ghanaian Government found it expedient to use a PPP to modernize its customs operations without having to finance on its own the total cost (US\$ 12 million) for physical infrastructure, communication networks, upgrading customs facilities, and electric generators placed in remote border stations.

THE PRIVATE SECTOR UMBRELLA BODY

The Government identified the private sector as an engine for economic growth. It made efforts to build the capacity of private sector groups and business associations to play a greater advocacy role in formulating and implementing policy. An umbrella body for various private sector business associations – the Private Enterprise Foundation – was established. With support from development partners, government's policy reforms included:

- Removing restrictive regulations;
- Building private sector capacity through training and consultancy services;
- Developing product, market, and management information systems (MIS);
- Investing in infrastructure, for example by developing artisanal centres.³

The President of Ghana, John Kufuor, in his inaugural address in January 2001, declared a 'Golden Age of Business for Ghana'. This resulted in closer collaboration between the public and private sectors, including the creation of a Ministry of Private Sector Development to promote public-private sector collaboration.

EXPORT-LED GROWTH THROUGH CUSTOMS REFORM

When the Government implemented its Gateway Programme,⁴ which sought to attract investments to accelerate export-led growth and remove constraints to trade development in Ghana, it decided to reform the processes and procedures used by the Customs Excise and Preventive Service (CEPS).

This project aimed to attract export-oriented investors to Ghana to accelerate export-led growth and facilitate trade. The project also sought to increase the competitiveness of Ghanaian products in the global market through the reform of legislative, regulatory, and incentive systems; institutional strengthening and capacity building; and development of private participation in infrastructure. It aimed to reduce and improve the processing time for customs documentation and standards, prevent fraud and improve revenue collection.

The project also aimed to enhance the capacity of customs and related agencies by equipping them with an electronic data interchange (EDI) platform that inter-connects both private and public agencies to avoid duplication, and reduce costs and time for processing customs and trade documents.

AN ELECTRONIC COMMUNITY NETWORK

The Government of Ghana faced financial constraints and a lack of technical capacity for maintaining the previous system. Therefore, a PPP was considered an ideal method for implementing the new automated system, to foster stakeholder buy-in, and to ensure its sustainability. As a result, the Government attempted to bring in as many credible stakeholders as possible together with a strategic technical partner.

The Government was motivated to use this arrangement drawing upon its earlier experiences in executing trade facilitation and revenue management projects. Previous experience with such projects showed they suffered from delays so that by the time the project was implemented the desired goals were not fully achieved. The projects were largely driven by technical assistance, but with inadequate provision for renewal or maintenance of investments to ensure project sustainability once the technical assistance was withdrawn.

The Government was the primary project champion. However, through earlier public-private sector policy dialogue, both sectors had identified the need to address certain constraints affecting business competitiveness. Thus, the private sector was also clamouring for the project.

GCNet was established in October 2000. As a joint venture PPP, its aim was to ensure that all stakeholders with a vision for enhancing Ghanaian competitiveness participated in this electronic community network for the processing of trade and customs related transactions.

GCNet mission

- Automation of customs procedures
- Fully integrated EDI service/Tradenet
- Enhance the speed of customs clearance thereby accelerating speed of port clearance and reducing cost of business
- Improve transparency in customs procedures/Reduce discretionary practices
- Domestic revenue mobilization
- Improve trade management and trade information/statistics to government

GCNet business model

- Ten-year Government of Ghana mandate
- Joint Venture Agreement – GIPC/Companies Code
- Approx US\$ 6 million initial equity x 2.5
- Ghana customs' equity was financed by World Bank
- Mandatory use of system under customs law
- Parliamentary legislation for electronic transactions
- User fee of 0.4% of FOB value
- Two year customization/training/infrastructure
- Technology partners from Singapore and Mauritius
- Build – Own – Operate

Source: Courtesy of GCNet.

Partners brought into the partnership financial resources, technical know-how, and other strengths. They also became very supportive project champions that drove the initiative.

OVERCOMING CHALLENGES

The Government needed to identify a strategic technical partner that was prepared to invest in the project and drive the process. This was considered critical because previous e-governance projects implemented by the Government had not met start-up goals. Past projects had been unsustainable due to inadequate budgetary resources for investment and recurrent expenditure, lack of managerial

core competencies and lack of drive to overcome the inherent change management challenges.

In earlier e-governance projects needs were identified. Through the Government's initiative or through donor support, technical solutions were identified and deployed. Unfortunately, due to donor requirements, such as tied aid or drawn-out project appraisal and implementation requirements, optimal technical solutions and processes were not implemented. In the past, relatively little attention was paid to complementary processes that could have contributed to project success. For example, effective change management could have been undertaken by sensitizing and educating stakeholders.

The projects were often implemented through project management teams that were not core officials of the implementing institution, but outsiders recruited for the life of the projects. As a result, institutional core competencies and capacities to ensure the sustainability of the projects were not built. Specialized information and communications technologies (ICT) skills and managerial expertise required for such e-governance projects were often lacking within the public services. In addition, the public sector could not retain specialists because it could not compete with the better conditions of service offered by the private sector.

Once the projects were rolled out, there was insufficient new funding to undertake system upgrades as new technologies or operating systems evolved. In due course, the system failed to meet operational requirements and the e-governance projects failed.

CHOOSING THE RIGHT PARTNERS

To address these challenges, the Government identified Société générale de surveillance (SGS), as a potential partner. SGS is a global company with substantial financial resources to finance the project.

Through its trade inspection and verification services, SGS was seen as having adequate experience in trade facilitation and revenue enhancement programmes. SGS had a strategic partnership alliance with the foremost TradeNet operator, then Singapore Network Services. TradeNet is an Integrated Trade Community Network. The concept of an Integrated Trade Community Network was initially developed in Singapore with TradeNet in the 1990s. Since its inception, the system has continuously evolved and TradeNet Singapore today handles more than 20 million files per year and has become a reference around the world.

It is generally recognized that software applications for government use rarely succeed if they are implemented as one-time events without continuous operational support and infrastructure management. The TradeNet concept is

based on the understanding that the software is a tool that needs full continuous support to deliver its full potential.

GCNet public-private partnership	
■ Ghana Customs	20%
■ Ghana Shippers' Council	10%
■ Ghana Commercial Bank	5%
■ Total public	35%
■ Société générale de surveillance	60%
■ Ecobank Ghana Ltd	5%
■ Total private	65%

Source: Courtesy of GCNet.

The software evolves with time and users must be appropriately trained to use it.

The TradeNet system significantly reduces clearance time, increases customs revenues, reduces errors due to multiple data entry, increases transparency and enables consistency in processes. It is not a stand-alone off-the-shelf product that can be implanted on a 'plug-and-play' basis. TradeNet is a flexible, modular system that is highly customized to suit the needs of a particular country taking into consideration existing assets and local trade particularities.

SGS was prepared to invest and commit to driving the project implementation process through a strategic partnership arrangement. SGS' commitment to the project differed from other proposals that primarily aimed to supply software and install hardware to run it without ensuring that the system works efficiently and sustainably.

The Government chose SGS and gave the company a mandate to identify suitable partners for the PPP, which would then be considered by the Government. Overtures were made to all relevant stakeholders that had an interest in imports and exports through Ghanaian ports in collecting trade-related revenue. Stakeholders included the Ghana National Chamber of Commerce and Industry (GNCCI), the Association of Ghana Industries (AGI), the Ghana Shippers' Council (GSC), the Ghana Ports and Harbour Authority (GPHA), the freight forwarders' associations, inspection companies, the ship owners' association, banks and a telecommunications company.

SELLING THE PROJECT

Given the poor track record of previous e-governance projects and the perceived riskiness of this start-up project, most of these stakeholders were reluctant to invest, despite their interest in the project. An AGI executive at the time commented, 'We want this project like yesterday. You take off and we'll join later.'

This guarded response was further reinforced by the fact that in 2000, when the project was being promoted, interest rates were very high at around 40%. Government treasury bills and bonds offered a more secure return than investing in a perceived risky e-governance project.

To address these challenges SGS, as a strategic technical partner, became an active promoter of the project – preparing the project prospectus, sensitizing all stakeholders and potential members about the project's benefits for primary stakeholders and the economy as a whole. SGS' successful experience in Singapore was also showcased.

With the Government's support, selected stakeholders were given the opportunity to see, appraise and learn first-hand about similar experiences elsewhere. For example, they could study the case of Mauritius where a public-private partnership model had also been used. Stakeholders were regularly informed about each development stage of the system and its implementation. In doing so, they could measure the progress of the work with each goal or benchmark that had been set before the project start up.

Through a Project Implementation Team and its sub-groups, which cut across a broad spectrum of stakeholders, the interested parties considered themselves as having a vested interest in the rollout of what became a community project. With these measures, a convincing outcome was showcased and the scepticism that plagued similar e-governance projects was overcome.

MAKING LEGAL AND REGULATORY CHANGES

To implement the GCNet project, the legislative framework underpinning customs clearances needed review. In the past, almost all the processes were manual. Introducing an automated system required new legislation that recognized electronic processing of transactions and payments. In the light of these requirements, the Ghanaian parliament passed a new Legislative Instrument (LI).⁵ To ensure easy passage through parliament and subsequent compliance by stakeholders, the LI was drafted by a broad stakeholder group to ensure their concerns were considered and addressed.

After its enactment, the LI was periodically refined with Commissioner's Orders (operational regulations) that revised some operational procedures. The Commissioner of Customs was given these powers under the Customs Management Law, which governs the administration and operations of Customs.⁶

In addition to automation, certain operational and administrative processes had to be rationalized. Because automating existing inefficient processes was pointless, certain existing operational functions were eliminated, such as Face Vet,⁷ Numbering⁸ and Bond Seat.⁹ Some new

functions were created to ensure efficient and transparent operations, such as Compliance Officer¹⁰ and Help Desk Officer.¹¹

A culture of change management was promoted through a number of measures, including:

- Acquiring new skills;
- Improving the work environment with refurbished offices;
- Promoting and rewarding efficient work.

The photos below show a CEPS office before and after the GCNet project was implemented.

In addition to providing CEPS officers with new tools and systems, their work environment was improved to enable them to experience and understand the changes, thereby promoting a new work ethic. Officers were encouraged to provide quality service, while beneficiaries of the new service, such as trade operators, experienced and benefitted from the change.

ADDRESSING TECHNICAL ASPECTS

The technical aspect of the project entailed introducing TradeNet, an EDI platform with Extensible Mark Up Language and functionalities for transmitting electronic messages and replies between trade operators, customs, regulatory bodies involved in the clearance process for goods through the ports, and others who use the data generated.

A versatile automated system for processing all customs declarations and payments was developed and deployed. This system enabled all customs operational functions to be carried out more efficiently and effectively, including manifest transmission and integration, importer and exporter declarations, warehousing, free zone, valuation and transit tracking.

Electronic issuance of certificates, permits, licences and exemptions required for customs clearances by regulatory agencies – for example the Standards Board, Environmental Protection Agency, Investment Promotion Centre, etc. – play an important role in importing and exporting goods. TradeNet serves as a Single Window through which all trade and customs electronic procedures are processed. Similarly, relevant agencies such as the finance and trade ministries, statistical service and central bank are connected to the system for access to data they require to prepare their statutory reports on issues such as foreign trade and revenue reconciliation. Data is also used in areas such as development planning.

An e-services portal was introduced so that users could check on the status of their various declarations, access the car valuation database and run web-based reports. The portal also enables transit operators to track consignments along the transit corridor.

OPERATING THE PROJECT

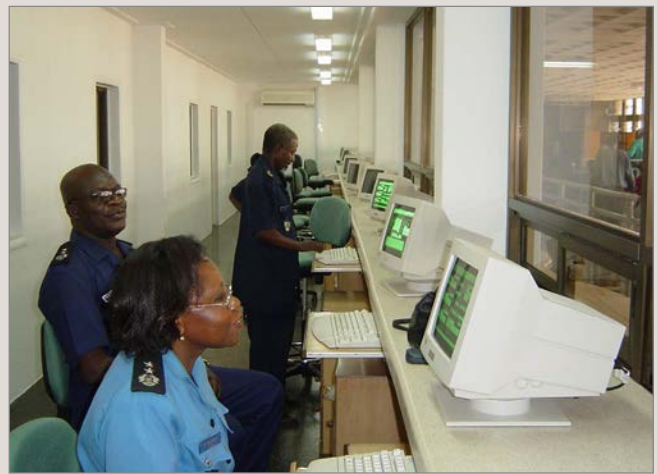
The project operates primarily through GCNet, the PPP joint venture company, which is responsible for developing and

Box 4: Before and after GCNet – clients see the difference



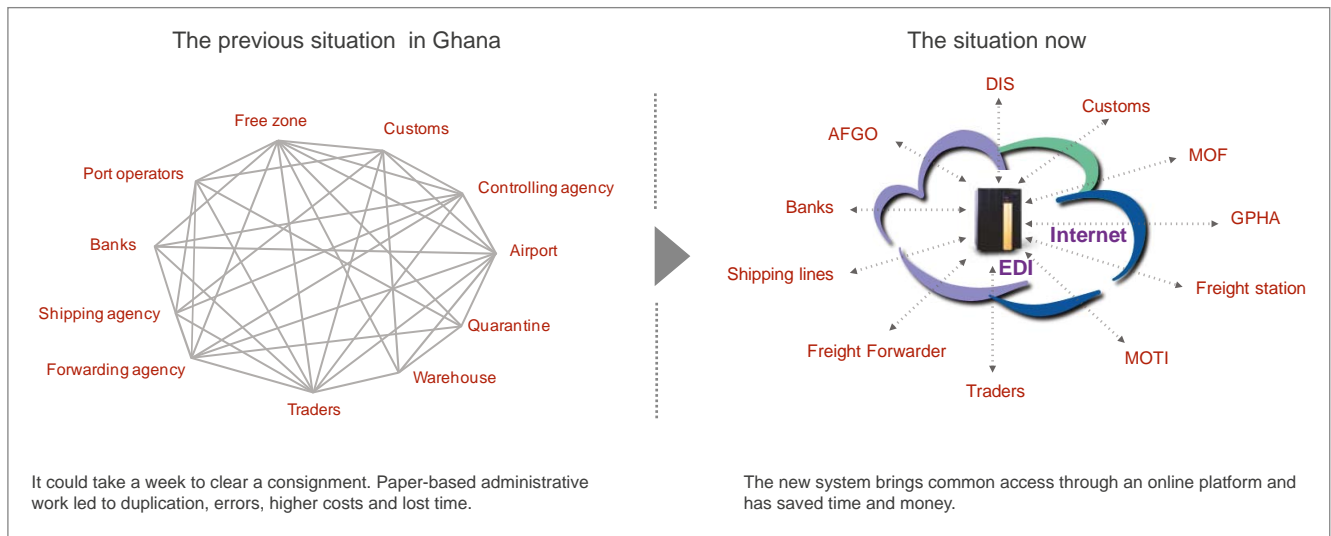
Before GCNet: Insufficient automation brought customs delays.

Source: GCNet.



After GCNet: The new system has led to a better work environment and faster processing times for exporters.

Figure 3: Before and after – Streamlined processes save time



Source: GCNet.

Note the following acronyms: Ministry of Trade & Industry (MOTI), Ghana Ports & Harbours Authority (GPHA), Ministry of Finance (MOF) and Destination Inspection Services (DIS).

deploying all systems, including hardware and software. While it operates the e-messaging platform that serves as the front-end system for all non-customs users, Ghana CEPS is responsible for the operation of the back-end application, the Customs Management System (CMS).

The front-end system is part of the software that is a thick client application, which provides users with more features, graphics and choices, thereby making the applications more customizable. The thick client application is used by importers, exporters, freight forwarders, carriers, ministries, departments and agencies to enable them to communicate and undertake relevant processes electronically. The back-end application is the CMS application that processes the output from the front-end system, for example by validation or verification as this process queries the CMS database.

A board of directors, comprised mainly of representatives of the PPP partners and a government representative, ensures that the project meets its service mandate. Externally, the PPP's operations and performance are regulated and reviewed by the Ministry of Trade & Industry through a Review Committee. The PPP collaborates with various regulatory agencies, including the Ministry of Finance and Economic Planning, the Revenue Agencies Governing Board, the Ministry of Ports and Railways and the Ministry of Communications.

MANAGING CHANGE

The GCNet system led to a radical change in the way Ghana CEPS operates. The automation process eliminated the manual mode of operations and the need to rationalize certain operations, while generating a number of changes.

Certain operational functions were eliminated and new ones introduced.

The new system was deployed in complex and intensely political agencies. Some users resisted the change, seeing it as a threat to their existence, perceived benefits and entrenched operational modes. To overcome this resistance, project champions with influence to act as change agents were identified to manage the change process and to assuage anxieties.

For example, a message was disseminated assuring CEPS officers that automation did not necessarily mean a loss of jobs if they were willing to be retrained. In fact, the new system generated a lot of data that needed to be analysed for management reporting purposes. The system did not lead to redundancies as was feared, but entailed some changes in job content for the Customs Officers.

An organizational systems review was implemented. Introducing corporate planning capacity in customs and an ISO certification programme ensured that some systems skills were improved on a regular basis. The review included compensation, appraisal, promotion, reward and incentive systems to ensure effective change management.

Efforts were made to build commitment, buy-in and ownership of the change agents. They were encouraged to learn to use the system, appreciate its capacity to drive the change process, and understand how the system contributes to CEPS goals, such as revenue targets. For example, if the clearance station commander, an older person with no prior ICT skills, could learn the system, his younger colleagues were obliged to learn to use it also. This not only improved knowledge and use of the system, but also enabled senior officers to establish authority and

show subordinate officers successful deliverables and how the new system helps to enhance customs operations. Leadership by example was displayed and ownership was established.

Chief agents were encouraged to exercise their authority, reward good performance and impose sanctions for bad performance. GCNet supported a customs annual award scheme for the best officers, provided logistical support to high performing stations and also provided a monthly stipend to key officers who use the system effectively.

PROJECT ACHIEVEMENTS

The GCNet project achieved stakeholder goals, which included:

- Simplifying customs procedures;
- Clearing goods faster;
- Facilitating quicker transit with a satellite tracking system;
- Increasing revenue collection;
- Improving the competitiveness of Ghanaian exports.

SIMPLIFYING CUSTOMS PROCEDURES

There was significant improvement in clearances of goods through customs.

- The former requirement for clients to shuttle to and from one agency to another to procure permits, licences, or exemptions needed for the clearance process has been largely eliminated.
- The tedious process of physically submitting cargo manifests to customs and other relevant agencies was eliminated as manifests are now submitted in advance electronically.
- Thirteen manual processes within the customs Long Room that used to take approximately two to three days have been eliminated.

CLEARING GOODS FASTER

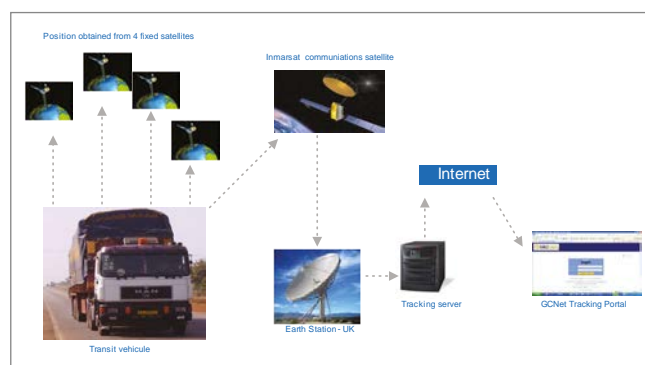
Clearing goods at the main port of Tema, which used to take on average two weeks, now takes an average of two to three days. Clearances through the second port of Takoradi are almost done in one day. Clearances through the airport are averaging two to four hours, unlike the two-to-three day average before the project. At land borders, consignments are processed in a matter of hours rather than a whole day or longer.

These clearance times have been possible because of the risk selectivity features of the system and the selective targeting of consignments. The system's risk selectivity features are varied, and configured by a range of parameters

determined by a high-level Risk Management Committee. Among the parameters used are intelligence from other customs administrations or security agencies and risk profiles of importers, exporters, agents, vessels, country of shipment, etc., based upon previous transactions or tax records.

FACILITATING TRANSIT WITH A SATELLITE TRACKING SYSTEM

With the introduction of satellite tracking, transit consignments are exiting the country quicker than when escorts were used.



Source: GCNet.

INCREASING REVENUE COLLECTION

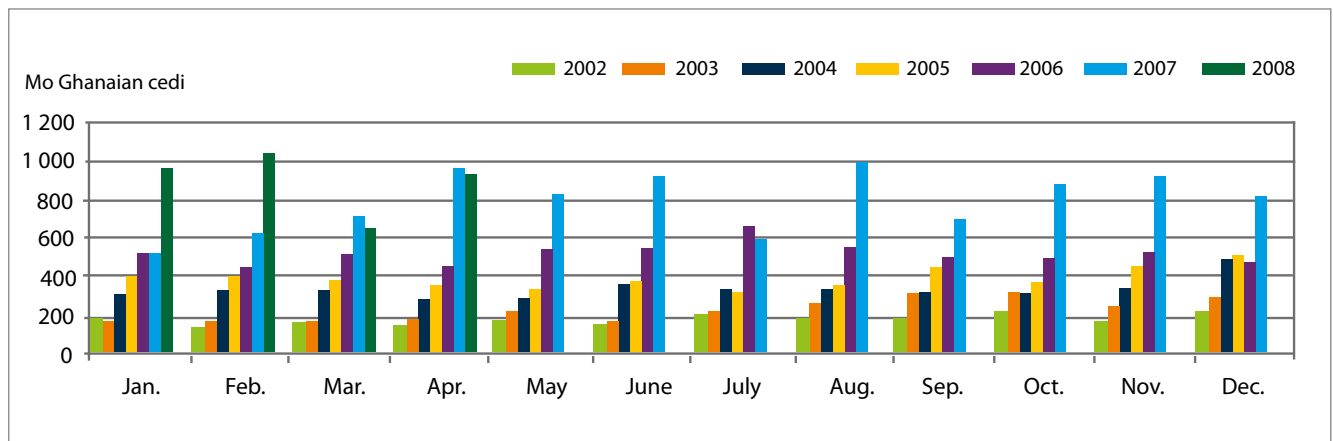
There has been a surge in revenue collection by customs since the project was implemented. From 2003 when the GCNet project started through 2008, there has been an average annual growth in revenues collected by customs of 33% for the port at Tema and 32% for the Kotoka Airport. Total revenues collected by customs grew by nearly 170% from 2003-2008 (see figure 4).

This significant growth in revenue is not a coincidence. The new system's control features ensure that while trade is facilitated, revenue collection is not compromised. For example, the disparate verifications of customs entries that used to give rise to inconsistencies in classifying and valuating consignments from one customs clearance station to the other have been eliminated.

Under the old, inefficient system, consignments could be smuggled out of the ports and cargo lists could be manipulated and not properly accounted for. These problems have been significantly eliminated by the new system, which ensures that carriers arriving at the ports provide customs with a detailed manifest of consignments prior to or upon arrival.

Other problems included the ineffective control of transit consignments, which led to their diversion onto the domestic market without payment of duties and taxes. The

Figure 4: Revenue grows at Kotoka International Airport, 2002-April 2008



Source GCNet.

new system has curtailed many of these problems. Similarly, the ineffective control and abuse of warehousing and free zone privileges granted to some trade operators have largely been addressed. In addition, by capturing export declarations electronically, it is possible to better track exports to ensure the proper export receipts are declared and, where necessary, recovered.

IMPROVING EXPORT COMPETITIVENESS

Competitiveness of Ghanaian exports has increased due to the expeditious processing of export consignments as well as the electronic issuance of permits and certificates of origin and their transmission to the authorities of the export destination. In the World Bank-IFC *Doing Business Report 2007-2008*, which ranks 178 economies for the regulatory ease of doing business, the IFC recognized Ghana to be one of the most improved countries for doing business. The IFC acknowledged that the GCNet system had been one of the major contributing factors to the improvement.

In 2005, Ghana ranked 108 in the World Bank-IFC *Doing Business* report's category of Trading Across Borders, with an index of 6 against a regional index of 8.5 and an Organisation for Economic Co-operation and Development index of 5.3 for export documentation. The report noted, 'In Ghana, new technology links with several commercial banks so that customs officers can confirm the payment of duties without the need for additional paperwork.'¹² By 2007, Ghana's ranking had improved to 61, and among the notable factors that contributed to this were applying risk management techniques and introducing EDI systems.¹³

In 2006-2007, Ghana received an award for being the top African reformer. It ranked as a global top 10 reformer for the second year running. It was noted, 'Changes in operations sped up imports, while new civil procedure rules and mandatory arbitration and mediation reduced the time needed to enforce contracts.'¹⁴

SUCCESS FACTORS

The PPP drove the successful implementation of the project, however, a number of other critical factors also contributed to its success, including:

- Government support and belief in the project;
- Credible partners;
- Developing specific project infrastructure;
- Phased-in project implementation;
- Tangible manifestations of success;
- Training, sensitization and capacity building;
- Responding to emerging trends and urgent requirements;
- Sustainable self-financing.

GOVERNMENT SUPPORT

The Government supported the project because it believed GCNet would contribute to realizing its Gateway Programme objectives of promoting trade, investment and competitiveness. This conviction was reinforced by the surge in government revenues after the project was launched.

The recognition of the PPP's contribution to the business environment in Ghana by international organizations such as the World Bank and the IFC reinforced the Government's support of the project.¹⁵

Over time, the Government has come to appreciate the potential of ICT to accelerate economic development and has sought to promote ICT initiatives. This is another reason why the GCNet is a win-win initiative for the Government and why it provided the support critical to the project's success.

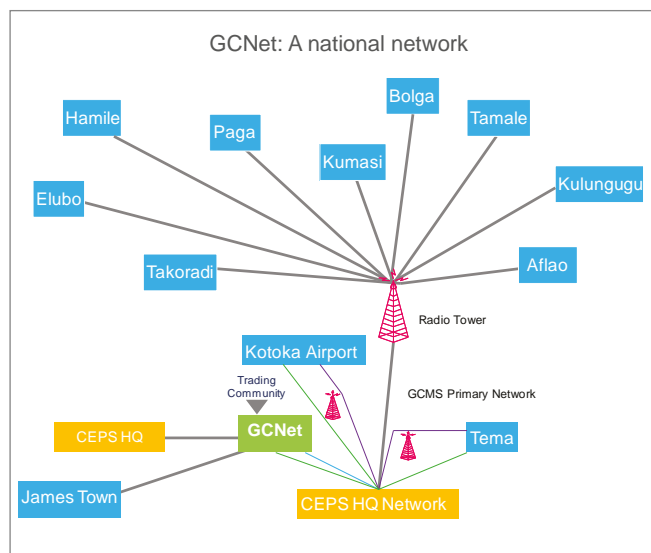
CREDIBLE PARTNERS

The strong public-private partnership of GCNet is due to the credible stakeholders that brought their core competencies to the partnership. The PPP harnessed the respective strengths of each partner. Individual strengths of the project champions were also critical to GCNet's success. For example, because integrity and ethics is at the core of the corporate governance philosophy of two of the partners, the PPP was obliged to adopt this philosophy.

The PPP was able to raise finance for its operations because two of the partners were banks. This gave the PPP the ability to raise additional financing when the need arose. As regards technical operations, the partnership could draw upon the technical know-how and experience of the partners in several areas, including performance of equipment, after-sales service support by vendors and disaster recovery plans.

PROJECT-SPECIFIC INFRASTRUCTURE

Another critical success factor was GCNet's willingness to invest in its own infrastructure to overcome the lack of existing infrastructure. Electricity supply and telecommunication services – particularly Internet services – were inadequate, limited to certain regions of the country, and unreliable where available. GCNet was compelled to implement its own infrastructure to ensure it was able to fulfil its commitment to operate on a 24-hour/7-day basis.



Source: GCNet.

GCNet installed generators and uninterruptible power supply hardware to complement the available supply of electricity. Fuel storage tanks with personnel to refuel them regularly were deployed. This ensured a regular electricity supply assured systems' uptime. Where service by the foremost service provider with the widest network was unavailable –

Box 5: GCNet – geographic coverage

Phased project coverage:

- 2001-2002: Development phase
- 2003-2007: Rollout phase
 - The Ghana Customs Management System (GCMS) was rolled out to the following CEPS stations, which collect more than 95% of CEPS revenue:
 - Kotoka International Airport, January 2003
 - Port of Tema, June 2003
 - James Town, August 2003
 - Takoradi, November 2003
 - Aflao, September 2004
 - Elubo, August 2005
 - Paga, March 2006
 - Kulungugu, March 2007
 - Hamile, June 2007

Ghana Telecommunications (GT) – GCNet either financed GT to extend its network or built the facilities itself.

A PHASED APPROACH

Another success factor was the phased approach adopted by the PPP. From an initial station at the Kotoka International Airport that was a microcosm of the entire operation, the project was gradually rolled-out throughout the country. In a relatively weak infrastructural environment, this phased strategy was considered more appropriate.

In addition to helping overcome the infrastructural constraints, this phased-in strategy helped to effectively address challenges associated with the change management process. The geographical or sectoral expansion of the service or deployment of new system features, at any point in time, was marked by particular challenges. These varied challenges included infrastructural, technological, human resource and attitudinal challenges. However, the phased-in deployment ensured these challenges were addressed successfully.

The phased-in strategy enabled the PPP to control costs, especially at remote border posts where it was compelled to build much of the telecommunication and logistical infrastructure. Predictably, the cost of implementing the project escalated in the relatively less developed areas where facilities were limited.

The phased-in strategy fostered cost-effective deployment, but also helped to sustain the delivery of a consistent, high

quality service that met – and is meeting – stakeholders' aspirations. The service delivery quality could not have been properly controlled with a multi-pronged deployment. As a result, the phased-in deployment was prudent and contributed to the success of the project.

TANGIBLE BENEFITS

The GCNet project strategy sought to demonstrate that the reforms were creating tangible manifestations of success, which had a positive effect on change management.

- Customs officers were provided with a more congenial work environment.
- Users perceived improved, customer-friendly service.
- Users also benefited from trade facilitation through quick clearance times as well as quick permit and exemption processing.

In this strategy, the PPP played an advocacy role, which ensured that initially resistant regulatory agencies came to perceive the benefits of the reforms.

Because of these tangible benefits and their positive impact on operations, stakeholders were prepared to support innovation and change, thereby contributing to the project's success.

TRAINING, SENSITIZATION AND CAPACITY BUILDING

The sensitization and training of users and capacity building for various stakeholders were also critical success factors. By 2007, 3,000 users had been trained to use various functions of the system.

Users were provided with training in valuation, tax audits, corruption and fraud detection. While not directly system related, this training helped ensure that use of the system was simplified and its benefits enhanced. The training programme is both local within the services and external, involving other governmental agencies, traders and the public. The external training is used for a number of purposes, including deepening know-how and exposure to best internal practices, and as part of the performance reward system to promote efficiency.

In addition to training, stakeholders are regularly sensitized to new system add-ons and features. Their input is also sought in the deployment process. In so doing, their buy-in has been enhanced.

RESPONSIVENESS TO EMERGING TRENDS

The capacity to respond promptly to emerging trends and urgent requirements has also been a critical success factor. GCNet has been able to take advantage of its PPP status to immediately address unforeseen exigencies, such as promptly reconfiguring the system to meet the requirements of the re-denomination of the national currency by the Bank of Ghana.

The PPP has been able to circumvent bureaucratic constraints. For example, while the PPP procures through tender processes, it has not been unduly constrained by bureaucratic requirements to advertise over a certain minimum period, as are purely governmental agencies or donor-funded projects.

When it became necessary to capture declarations made by oil marketing companies as they lifted petroleum products from the refinery, GCNet was quick to adapt its system to meet this demand. This was crucial in plugging revenue leakages associated with petroleum product lifting by the oil marketing companies.

Advantage was also taken of the PPP arrangement to adopt new technologies to deliver an effective service that responded to stakeholder needs and concerns. For example, the PPP responded to the challenges posed by the increase in transit trade and the need to eliminate the ineffective escort system with a sophisticated satellite tracking system, as illustrated above. These new technologies placed Ghana Customs at the forefront of transit tracking in Africa.

SUSTAINABLE SELF-FINANCING

To finance the initial cost of the GCNet project, the joint venture partners contributed equity capital. With the exception of one partner that contributed its equity in the form of hardware, all the partners provided equity in cash.

To recoup this initial investment and generate adequate revenue for replacing the initial investments, a fee structure levied only on import declarations was established. The fee structure was made mandatory, although certain sensitive transactions, such as petroleum imports, were exempted from fee payments. The partnership envisaged that through this arrangement adequate revenue would be generated to invest in new technology to ensure the systems continued to operate at the cutting edge.

The PPP arranged a fee structure that ensured the project does not depend upon government funding, but is able to raise its own funding to cover operational expenditures and finance new investments for replacement software, hardware, systems upgrades and systems maintenance. Investors recovered their investments through revenue from

the fees charged by the PPP. From this revenue, equity holders were paid dividends after the necessary corporate statutory obligations and provisions for new investments and expenditures were made.

IMPLEMENTATION CHALLENGES

Although the project was successfully implemented, a number of challenges were encountered during the process, including:

- Overcoming individual and institutional resistance;
- Ensuring compliance;
- Upgrading processes in other agencies;
- Assuring confidence and ensuring security.

OVERCOMING INDIVIDUAL AND INSTITUTIONAL RESISTANCE

Two human factors posed significant challenges. First, finding sufficient skilled personnel to operate the systems. Second, the reluctance of people to change the way they have done things in the past.

At the outset of the project, the computer skills of the system's target users were either nonexistent or at best limited. A number of target users were reluctant to learn the new skills required. To a large extent this was due to certain vested personal interests. For example, some individuals in key positions in the previous manual processes resisted the changes. This stemmed from the fact that the transparent electronic processes eliminated the possibility for them to have personal contact with trade operators, with the attendant loss of status and rent-seeking possibilities.

This resistance to change was also manifested at the institutional level. The rationalization of operations demanded a clear delineation of operational functions and boundaries. In a few cases, this gave rise to institutional turf wars, which led to a resistance to the revised new processes and operational workflows, which delayed implementation progress.

ENSURING COMPLIANCE

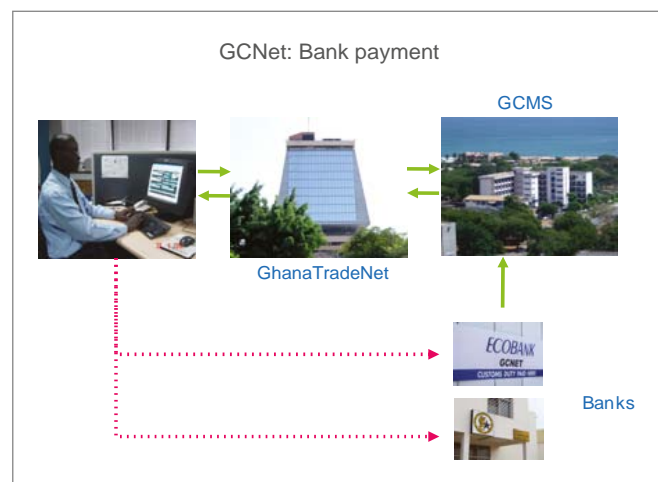
The general level of customs compliance in Ghana was low. Ensuring a credible level of compliance was maintained among trade operators, especially as attempts were made to remove undue controls and facilitate trade. Some feared that letting go of the previous manual controls would lead to undue abuses.

This was due to the fact that declarations made by a number of importers were questionable. Some compliance

officers were reluctant to accept innovations proposed in the new system. These innovations included risk selectivity and consignment targeting, designating certain declarants as 'Gold Card bearers' that need not be subject to intrusive examinations, and post clearance reviews to facilitate trade.

UPGRADING PROCESSES IN OTHER AGENCIES

To fully realize the benefits of a seamless clearance process, the manual, paper-based operations of other agencies within the clearance process needed to be automated. Developing and introducing complementary electronic systems for other trade-related agencies posed another challenge because not all systems became automated. For example, with regard to port operations the electronic issuance of bills of lading by the shipping lines to consignees or the amendments of bills of lading when shipments are made through consolidators – and the related payments – would significantly have contributed to expeditious clearances.



Source: GCNet.

ASSURING CONFIDENCE AND ENSURING SECURITY

A further challenge was the need to ensure the system's integrity was not breached and to assure and enhance stakeholders' confidence by consistently demonstrating through its performance that the system was credible and reliable. This was especially critical at a time when some existing manual revenue and security controls were being removed to facilitate trade.

At a time when reputable financial institutions were being hit by a spate of frauds, a major challenge was to ensure that the GCNet system, through which almost 60% of Ghana's tax revenue was collected, was not breached by intrusion, spam or various viral infections that had hit a number of

systems around the world and brought operations to a halt. The PPP ensured the system proved its mettle. With regular upgrades and by applying appropriate security measures, the challenge to assure the system's robustness and reliability was met.

CONCLUSION

A number of factors contributed towards bringing the PPP to fruition.

- First, the Government supported the project and invested through two public agencies, the CEPS and the GSC as well as the Ghana Commercial Bank (GCB), in which it held an equity stake.
- Second, because the technology had a proven track record, stakeholders' and partners' concerns were alleviated. After reviewing a number of options, Ghana modelled its TradeNet, technology and implementation on the Singaporean model with its PPP arrangements. The Singaporean model had proven to be a great success, which assured the partners about the potential of the GCNet PPP.

- Third, all potential partners invited to join the venture (especially those that eventually formed the partnership), were credible, some having significant international business operations with experience in complex ICT projects. They were not seen as 'cowboy operators who were out for a kill', but entities with a reputation to protect and a will to execute a successful project.

SGS S.A. purports to be the world's leading inspection, verification, testing and certification company. GCB had the largest branch network and the highest net worth of any bank in Ghana at the formation of the PPP. Ecobank was aspiring to surpass its original mission of being the west African bank to being a pan-African bank.¹⁶

- Fourth, GCNet's business model is sound and ensures that the system is used effectively for the mutual benefit of all stakeholders. The PPP is designed to be self-financing – a service mandate ensures customs declarations are processed through the system for a regulated fee.

As a PPP, GCNet worked out a payment structure that ensures it does not depend upon budgetary funding. GCNet raises its own resources to cover operational expenditure and finance new investments for replacement hardware, systems upgrades, and for maintaining systems integrity at levels that ensures GCNet operates with leading edge technology.

GCNet invests continuously in ICT infrastructure, hardware and software. Its operating systems are stable, reliable, secure and meet high operational standards and requirements. ICT capacity was developed with substantial flexibility and scalability to meet client needs and emerging exigencies. GCNet is committed to a programme of new investments in ICT to ensure that it deploys cutting edge technology, meeting international best practices.

GCNet invested almost US\$ 2 million in communications to develop a secured and robust virtual private network (VPN), including ownership of a radio frequency. The VPN, comprising broadband fibre optic links, radio networks, E1 links, dedicated leased lines and dial up lines, is scalable to accommodate additional links that may be required for other operations. The VPN stretches across the country, including selected border points, and covers every region.

GCNet has business continuity and disaster recovery systems, including two data centres, which ensure that the system is available on a 24-hour/7-day basis. To assure the integrity of operations, promote quality delivery to clients, and continued improvement in the quality the service, GCNet introduced control regimes. These control regimes include an effective security system, operational controls, and quality management.

- Fifth, the PPP is well managed by a team of professionals that reports to a board of directors. From its membership, the board is arguably one of the strongest corporate boards in the country. GCNet adheres to good corporate governance principles, with a code of ethics requiring the highest standards of transparency. Full disclosure principles are followed to foster prudent management and reporting of corporate resources. GCNet also has a number of technical partners, whose resource capacity can be drawn upon.

The GCNet PPP is sustainable and has become the benchmark for e-governance projects. It has proved its worth. In Ghana, there are attempts to replicate its approach in all new e-governance projects. Given its resounding success, the PPP model provides an example of best practice and could be replicated in other developing countries.

ENDNOTES

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3. Fox, J., 'An Evaluation Of Trade Capacity Building Programs. USAID Behind The Border Trade Capacity Building', *Working Paper No. 14*, pp. 7-8, The Louis Berger Group, October 2004.
4. The Ghana Trade and Investment Gateway Project (GHATIG) is a World Bank funded project designed to attract export-oriented investments, facilitate trade and enhance Ghanaian competitiveness through regulatory reforms, capacity building and development of private participation in infrastructural and systems development. Source: 'World Bank Appraisal Document', Report No. 17736-GH, p. 7, 5 June 1998.
5. Customs, Excise and Preventive Service (Automation) Regulations, Legislation Instrument (L.I. 1704), enacted 13 May 2002.
6. *Customs, Excise and Preventive Service (Management) Law*, 1993 (PNDC Law 330).
7. Face Vet was the process whereby manually completed Single Administrative Document (SAD) forms were presented to a CEPS officer to verify that the form had been properly filled in before data entry clerks entered it into the computer.
8. After data entry, each SAD was presented to a CEPS officer for a unique number.
9. In the case of transit declarations, the SAD had to be submitted to a unit that administered the bond posted by the customs officer as a guarantee against the potential duty and taxes payable on the consignment in the event that it did not exit the country and was diverted on to the domestic market. This unit is referred to as the Bond Seat.
10. Compliance Officers monitor and control declared consignments that are selected for review and examination.
11. Help Desk Officers now assist with enquiries by declarants and operators, for example, by explaining which process to follow and duty or tax rates payable.
12. *Doing Business Report 2005*, World Bank-International Finance Corporation.
13. *Doing Business Report 2007: How to Reform*, World Bank-International Finance Corporation.
14. *Ibid.*
15. *Ibid.*
16. For more information: www.ecobank.com, www.gcb.com, and www.singlewindow.sgs.com.



CHAPTER III

THAILAND'S SUCCESSFUL JOURNEY

MAKING INROADS IN REGIONAL AND GLOBAL AUTOMOTIVE NETWORKS

CASE STUDY EXECUTIVE SUMMARY	42
THAILAND'S RESPONSIVE POLICY ENVIRONMENT	43
FROM IMPORT SUBSTITUTION TO GLOBAL INTEGRATION	44
INDUSTRY EVOLUTION	45
CHANGING DYNAMICS OF PRODUCTION	46
THE INDUSTRY'S GROWING ROLE IN THE ECONOMY	49
THAILAND'S POSITION IN PRODUCTION NETWORKS	51
WHAT DROVE THAILAND'S SUCCESS?.....	53
CONCLUSION	55
ANNEX I: CHARTING TRADE AND INVESTMENT POLICIES 1960-2008	57
ANNEX II: THE EVOLUTION OF THE DENSO AFFILIATE IN THAILAND, 1972-PRESENT	58

THAILAND'S SUCCESSFUL JOURNEY

MAKING INROADS IN REGIONAL AND GLOBAL AUTOMOTIVE NETWORKS

CASE STUDY EXECUTIVE SUMMARY

In many countries, the automotive industry has been the target of government-led industrial development. The sector is a driver of growth, employment, cutting-edge technological expertise and is a stimulus to other sectors. Automobiles are complex products, consisting of numerous parts and components that involve different production processes. Independent suppliers in industries such as textiles, glass, plastic, electronics, rubber products, steel and other metals manufacture many of these parts and components.

Promoting the automotive industry can boost complementary investments by auto parts firms, thereby creating an enabling environment for broad-based industrial growth. However, only a handful of developing countries have managed to create an internationally competitive automotive industry that delivers potential development dividends. In most cases automotive production has been a high-cost activity carried out within the confines of a protected domestic market heavily relying on direct government support.

Over the past two decades, Thailand has emerged as a vibrant hub of vehicle production for the regional and global markets. Rapid expansion in the automotive industry has spawned a parts and components supplier network in the country, resulting in an impressive increase in local content in Thai-made cars. This has transformed Thailand into the 'Detroit of the East'¹ with most of the major players in the international automotive industry using the country as a production platform.

Thailand's proactive automotive sector policy represents a highly successful, private sector led, market-oriented strategy. Thai success in automotive production has been underpinned by a favourable combination of three factors:

- Structural changes in the global auto industry that permitted countries in the periphery to join production networks for regional and global markets;
- Pragmatic, market-oriented policies that enabled the domestic auto industry to evolve with trends in the wider global economy;

- The size of the Thai market that met the requirements of domestic car assembly – in particular the one-tonne pick-up truck – to achieve economies of scale.

The policy instruments used by Thai authorities during the import substitution era were fundamentally the same as those used by their counterparts in other developing countries: tariff protection to entice multinational enterprises (MNEs) to set up production plants for the domestic market and local content requirements (LCR) to force these plants to forge backward linkages with local auto part makers.

However, Thai policymakers implemented these policies in a market-oriented manner in consultation with automakers and other private sector stakeholders. At the same time, Thailand was the first developing country member to honour World Trade Organization (WTO) commitments.

This pragmatic approach was instrumental in winning investor confidence and created a solid foundation for building a world-class production base. Unlike Malaysia and Indonesia, Thailand never pursued a national car policy; both foreign and local companies were treated on an equal footing. For a chronology of trade and investment policies that had an impact on the Thai automotive industry 1960-2008, see annex I.

Another important factor is that by design or by sheer luck, the Thai Government's liberalization of the automotive industry from the late 1980s coincided with the structural shift in the industry towards the production of a 'global car'. Thailand benefited from a first mover advantage in attracting global players to set up production bases in the country. Abolishing LCR and ownership restrictions on local affiliates of foreign firms set the stage for linking the domestic industry to global production networks. Eliminating these restrictions prompted and facilitated MNE automakers and part suppliers to set up new affiliates and to bring more advanced technology to the affiliates in Thailand.

The economic downturn caused by the global financial crisis has had a notable adverse effect on the Thai auto industry. Production declined from 124,656 units in October 2008 to 53,644 units in April 2009, the lowest since the 1997–1998 Asian financial crisis. From May 2009, vehicle production has begun to recover. The recovery appears to be gradual and a V-shaped rebound is unlikely. Prospects for expanding exports to emerging markets have not been

severely affected. However, demand in developed countries – the EU in particular, which accounts for nearly half of total exports – is likely to remain subdued for at least the next two to three years.

This case study examines the growth and the current state of Thai automotive industry,² focusing on the factors that underpinned the successful transition from the country's import substitution phase to global integration through export expansion. It aims to broaden understanding of Thailand's success factors and to help frame policies for better outcomes in an era of rapid structural change in vehicle production at national, regional and global levels. It is based on data and information gathered from two main sources.

The discussion on automotive policy and trends and patterns of production and trade in Thailand is based on a survey of previous studies and analysis of data gathered from various secondary sources. The information used in analyzing firms' perception of government policy and the nature of linkages between automakers and parts producers in Thailand come from firm level surveys conducted during June-August 2006 and August-September 2009.³ The surveys covered 41 firms – five carmakers and 36 auto part suppliers – located in the automotive clusters in the Rayong and Chonburi provinces.

THAILAND'S RESPONSIVE POLICY ENVIRONMENT

As part of the country's overall industrialization strategy, the Thai automotive industry has evolved through two distinct phases. From the early 1960s until the late 1980s import substitution drove the development strategy. During this period, the Thai Government enticed carmakers to set up assembly plants in the country by providing tariff protection for vehicle manufacture and imposing LCR to promote local parts manufacture. From 1990 onwards the Government has begun to rely on market mechanisms. For a chronology of trade and investment policies that had an impact on the Thai automotive industry 1960-2008, see annex I.

SETTING THE STAGE FOR INDUSTRIAL GROWTH

As in many developing countries, Thailand's automotive industry was one of the first targets of industrial development through import substitution. In the early 1960s, tariffs were imposed on imports of completely built units (CBU) of passenger cars (60%), vans (40%) and pick-up trucks (20%). Tariff rates applicable to imports of completely knocked down (CKD)⁴ kits and parts of each of the three categories were set at half of the CBU rates. High-end product tariffs combined with lower tariffs on imported inputs naturally favoured domestic assembly of imported vehicles. Motor vehicle tariffs were the highest in Thailand's overall import duty structure during the ensuing four decades.

From 1960, the Government embarked on an investment promotion policy to complement protectionist trade policy. The Board of Investment (BOI) was established to approve foreign investment projects and implement investment promotion measures under the Investment Promotion Act (1960). The BOI introduced a range of investment promotion measures, including income tax breaks for approved investment projects. Unlike in many other developing countries, investment promotion policy in Thailand treated domestic and foreign investors equally. A revision to the Investment Promotion Act in 1977 stipulated majority Thai ownership in domestic market oriented joint venture firms, which are firms that sell more than 70% of output in the domestic market. Other than this ownership restriction, foreign investment policy remained highly liberal throughout the ensuing years. Foreign firms had the option of setting up affiliates in Thailand without obtaining BOI approval.⁵

By the late 1960s, there was a growing concern that the nascent automobile industry had failed to set the stage for broad-based industrial growth through backward linkages with the local parts and components industry. In response, the Government set up a multistakeholder Automotive Development Committee (ADC) in 1969, comprised of officials from BOI, the Ministry of Industry, the Ministry of Finance, the Ministry of Commerce and the Bank of Thailand, as well as representatives of Automobile Industry Club and the Association of Thai Industries. The ADC had a mandate to design and implement LCR measures.

According to the LCR system designed by ADC that came into effect in 1975, domestically assembled passenger vehicles had to use locally produced parts equivalent to 25% of the total value of the vehicle to qualify for the import of CKD kits and auto parts. The LCR requirement for commercial vehicles and pick-up trucks was set at 15%.

The introduction of the LCR system was accompanied by an upward adjustment in import tariffs on CBU units of passenger vehicles, vans and pick-up trucks to 80%, 60% and 40%, respectively, combined with an increase of the respective rates on CKD kits to 50%, 40% and 30%.⁶ As a further measure to promote local content, in 1978 an import ban was imposed on CBU passenger vehicles and import duties on CKD kits were increased to 80%. The tariffs on CBU units and CKD kits of vans and pick-up trucks were increased to 80% and 60%, respectively. Approval of new automobile assembly plants was withheld in 1978 because the existing plants were running under capacity. In 1984, domestic assembly of passenger cars was limited to two models each of 42 brands.

The new LCR system soon encountered implementation problems for two reasons. First, the value-based LCR calculation was sensitive to exchange rate fluctuations, making it difficult to calculate the domestic currency value of the imported parts. Second, there was evidence of widespread manipulations of the system by carmakers by understating the value of CKD kits on shipping documents and over-invoicing the value of local purchases. To redress

these problems the ADC, in consultation with the carmakers, developed a new point-based LCR system. Under the new system, effective 1983, every car part was assigned a point and auto assemblers were required to use locally produced parts up to a minimum mandatory total, initially set at 50 points. This was reduced to 45 points in the following year in response to requests by automakers.

In 1983, then-Minister of Industry Ob Vasuratna debated the idea of a Thai vehicle project that aimed to increase the local content of domestically assembled cars first to 70% and then to 100% within a period of 10 years. Local parts manufacturers warmly welcomed the project, but it faced strong resistance from the carmakers, in particular from Toyota, the largest local car assembler in the country.⁷ The major concern of carmakers was that the high LCR could depress domestic demand for both vehicles and parts with adverse implications for the growth of the nascent car industry. The underlying logic of the argument was that given the prevailing ban on CBU imports, carmakers could easily pass the increase cost resulting from high LCR on to customers.

The Government's compromise response involved two key elements. First, the LCR target for passenger cars was set at 54 points based on a two-way classification of auto parts – a mandatory list (Account A) and selective list (Account B) – with LCR points divided equally between the two lists. Carmakers were required to adhere strictly to Account A in procuring inputs and they were permitted to choose items freely from Account B. If any of the parts in list A was not available locally, carmakers could select substitutes from the selective lists to fulfil the requirement. Account A consisted of several parts that most carmakers had already been procuring domestically, such as radiators, batteries, wiring harnesses, mufflers, wheels and tyres, glass doors and rear springs. As a result, there was little resistance from carmakers to the new system.

Second, a new project aimed at local production of diesel engines for one-tonne pick-up trucks was launched. The One-Tonne Diesel Engine project included two key elements:

- Giving government approval to three selected firms: Siam Toyota Manufacturing, Isuzu Engine Manufacturing and Thai Automotive Industry (a Nissan affiliate) to locally produce diesel engines for one-tonne pick-up trucks subject to specific LCR and export performance requirements;
- Creating a captive market for the engine producers by requiring local assemblers of one-tonne pick-up trucks to use only locally produced engines.

ECONOMIES OF SCALE

The Government gave approval to only three to firms as it believed this would enable them to achieve efficiencies through economies of scale. The LCR applicable to engine manufacturers stipulated that they use at least 20% local

engine parts in the first year (1989), increasing by 10% every year to achieve 70% local content by the end of the seven-year implementation period. The producers were given flexibility to decide what components to procure locally, subject to the condition that by 1995 they achieve full localization of casting, forging and machining of cylinder blocks, cylinder heads, crankshafts, camshafts and connecting rods. According to the export performance requirement, an engine manufacturer had to export in gross value not less than 120 million baht (around US\$ 4.8 million) worth of engines during the first four years, and at least 280 million baht (around US\$ 11.2 million) in each of the subsequent three years.

The diesel engine for one-tonne pick-up trucks was selected as the target of this project after assessing domestic demand. At the time, this vehicle model had the largest domestic demand among all vehicles assembled in Thailand because of its popularity among farmers and urban vendors. Annual production volume was rapidly approaching the 100,000 mark by the mid-1990s.⁸ In addition, the one-tonne pick-up truck is largely a homogenous product, whereas a given brand of passenger vehicle has a number of models. This greatly facilitated achieving economies of scale.

The ADC designed this project based on extensive consultation with the relevant private sector stakeholders. For instance, in the original LCR scheduled prepared by the ADC the final LCR target was 80% to be achieved by 1992. Based on requests by producers, this was subsequently reduced to 70% and the implementation period was extended by three years.

The project was strongly supported by the large Thai-owned agglomerated company, Siam Cement Group, whose subsidiary, Siam Nawaloha Foundry (SNF), was successfully manufacturing agriculture diesel engines under a joint venture arrangement with Kubota Corporation of Japan.

FROM IMPORT SUBSTITUTION TO GLOBAL INTEGRATION

Since the late 1980s there has been a shift in Thai automobile policy from domestic market orientation and towards global integration, setting the stage for the country to emerge as centre of automobile and auto part manufacturing in the region. The Thai economy entered a period of rapid growth in 1988. The resulting increase in domestic demand caused a shortage of locally assembled vehicles. In response, in 1990 the Government repealed the limits on the number of series of cars permitted for local production. In the following year the import ban on new cars was lifted. Since then, imports of automobiles have remained free of quantitative restrictions, with the exceptions of non-automatic licensing for the importation of certain types of diesel engines and a ban on motorcycle engines and used passenger cars.⁹

During 1998-2000, the Thai Government was the first developing country to honour its commitment under the WTO Agreement on Trade-Related Investment Measures (TRIMS). In 1999, all selective incentives granted to export oriented activities and the 49% equity ownership requirement on domestic market oriented projects was abolished. LCR was abolished effective January 2000.

In 1995 Thailand became a signatory to ASEAN's Brand-to-Brand Complementation programme,¹⁰ which aimed to promote trade in parts and components among auto companies operating in ASEAN member countries. It provided for 50% reduction in prevailing import duties on parts and components among member countries, while treating these imports as local content in estimating the minimum local content of the final products (40%) applicable to duty concessions under the ASEAN Free Trade Agreement.

Since 2002 Thailand has signed a number of bilateral free trade agreements (FTAs). Of these, the Thai-Australia FTA and the Thai-New Zealand FTA have been in operation since 2005. The FTA with Japan came into effect in 2007.

In addition to these preferential tariff reductions, general MFN tariffs on CBU passenger vehicles and CKD kits were reduced in stages starting in 1992, exposing the domestic auto industry to increased import competition. However, automotive tariffs continued to remain high with a pronounced cascading pattern. Duties on CKD kits ranged from 10%-30%. Rates on CBU automobiles ranged from 20%-80%, depending on the type of vehicles. Given the cascading nature of the tariff structure, the effective rate of protection (ERP)¹¹ for domestic motor vehicle production is much higher than the average tariff. According to estimates based on data for 2005, the effective rate of protection for producing automobiles for the domestic market is as high as 64.8% compared to the overall manufacturing average of 24.4%.¹² An important issue is how the Thai industry achieved notable export success under a trade regime that continued to have a significant anti-export bias, as reflected in a relatively high rate of effective protection for production for the domestic market. This issue is discussed later in the case study.

INDUSTRY EVOLUTION

Following the imposition of import tariffs in the early 1960s, multinational carmakers, which until then had served the Thai market through exports from their home bases, set up assembly plants in Thailand. By the late 1960s six Japanese carmakers (Toyota, Honda, Nissan, Mitsubishi, Daihatsu and Isuzu), three European carmakers (Volvo, Renault and Mercedes) and the two American carmakers (Ford and General Motors) were present in Thailand. Many of them, especially Japanese carmakers, operated through joint ventures with large local conglomerates, although foreign ownership restrictions were not implemented until 1977.

With the sharp increase in oil prices during the early 1970s, there was a sharp decline in domestic demand for

automobiles, accompanied by a notable shift in demand to smaller-engine vehicles. As a result, five non-Japanese carmakers ceased to operate in Thailand. Because the Government suspended approval of new assembly plants and imposed an import ban on CBU vehicles in 1978, the number of carmakers remained unchanged at 12 for the next two decades. (Both local and foreign. See table 4.)¹³

Until the implementation of LCR measures in 1975, local car assembly predominantly used imported parts and components. At the time, there were about 20 parts and component manufacturers, but they were producing mostly for the replacement equipment market (REM) that supplies spare parts. Following the imposition of LCR, multinational car manufacturers began procuring parts locally. Some Japanese part producers established plants in Thailand.

At the same time, some carmakers engaged REM firms as original equipment manufacturers (OEM) suppliers. The number of parts manufacturers increased to around 180 enterprises by 1980. The range of locally manufactured auto parts widened and included rubber parts, suspension systems, radiators, inner panel pressed parts, brake drums, gaskets, pistons, safety glass, electrical equipment and wiring harnesses. Because the part producers tended to locate closer to their customers to meet the requirements of just-in-time production, the LCR mechanism set the stage for forming production clusters in the Rayong and Chonburi provinces.

The three firms involved in the One-Tonne Diesel Engine project (Toyota, Nissan and Isuzu) began to implement their production plans in the late 1980s. In 1986, Nissan expanded its operations aiming to export pick-up trucks to the Republic of Korea, Malaysia, Australia and New Zealand. That same year, Isuzu announced a three-step export plan for producing engines and pick-up trucks. Together, the three firms designed a production sharing arrangement to make implementing the project feasible, particularly in the areas of casting, forging and machining processes. Under this arrangement, each firm agreed to produce components to be exchanged among them.

Ford, Daimler Chrysler and General Motors (GM) re-entered Thailand in the mid-1990s with the prime objective of producing one-tonne pick-up trucks. Following its 1993 merger with Mazda, Ford resumed vehicle assembly in Thailand in 1995 using Mazda's existing production base. That same year Daimler Chrysler re-entered the Thai auto industry through its merger with Mitsubishi. GM established its own new assembly plant 1996.

Production capacity in the car assembly industry began to increase rapidly from the second half of 1990s. Total production capacity increased ten-fold, from 160,000-1.6 million, between 1989-2006. Japanese carmakers accounted for over 90% of the total installed capacity, with Toyota alone accounting for one-third (see tables 4 and 5). One-tonne pick-up trucks accounted for 57% of the total capacity.

The expansion of the auto assembly industry through multinational participation was accompanied by a similar expansion in the local auto parts industry. Auto parts manufacturers, which had already entered Thailand, expanded their operations. The expansion of Japanese auto parts maker Denso in Thailand provides an example. Denso first set up a factory in 1972 to produce cooling systems. It then established two new factories in 1995 and 2000 and an additional five since then to produce a wide range of auto parts. To track the evolution of Denso's growth see annex II.

Many foreign part suppliers, which had been operating through joint ventures with local partners, expanded production capacity following the removal of the ownership restriction in 1998 by increasing their equity and, in some cases, by acquiring full ownership. With change in ownership, multinationals introduced cutting edge technology, better managerial practices and close supervision of assembly and production by bringing in foreign technicians and managers.

Until the mid 1990s, Japanese companies dominated the foreign segment of the Thai auto parts industry. Since then, several world-class non-Japanese parts manufacturers have entered the industry. By 2008 there were around 700 first-tier firms and 1,100 second- and third-tier firms in the Thai auto parts industry.¹⁴

CHANGING DYNAMICS OF PRODUCTION

Automobile production increased annually over 10% from the mid-1980s, passing 500,000 by 1996 (see figure 5).

This impressive growth was interrupted by the financial crisis during 1997-1999, but production had regained the 1996 pre-crisis level by 2002. Output expansion during the ensuing years, when industry became increasingly export-oriented, was much faster. Between 2002-2008, total production increased from 800,000 to more than 1.4 million, an annual compounded rate of over 20%. In 2008, Thailand was the 14th largest auto producer in the world, accounting for 2% of the total global output. It was by far the largest auto producer in ASEAN and the fifth largest in Asia after Japan, the Republic of Korea, China and India (see table 6).

From the early 1980s, commercial vehicles accounted for nearly 70% of total domestic vehicle production. However, the share has declined from 2005 reflecting diversification to passenger cars. One-tonne pick-ups account for 90% of commercial vehicle production. Production of pick-ups increased from 47,000 in 1985 to 410,000 in 1995 and to more than 950,000 in 2008.

The economic downturn caused by the global financial crisis has had a notable adverse effect on the Thai auto industry. Production declined from 124,656 units in October 2008 to 53,644 units in April 2009, the lowest since the 1997-1998 Asian financial crisis. From May 2009, vehicle production has begun to recover. The recovery appears to be gradual and a V-shaped rebound is unlikely. Prospects for expanding exports to emerging markets have not been severely affected. However, demand in developed countries – the EU in particular – which accounts for nearly half of total exports, is likely to remain subdued for at least the next two to three years.

Table 4: Production capacity (units) of Thai car assemblers, 1989-2006

Car manufacturer	1989	1994	1999	2003	2005	2006
Toyota	24 000	100 000	200 000	240 000	350 800	450 000
Mitsubishi	40 000	126 600	160 000	190 200	170 200	208 000
Isuzu	27 400	83 200	140 600	189 600	200 000	200 000
General Motor	–	–	40 000	40 000	100 000	160 000
Auto Alliance & Mazda	7 200	8 400	135 000	135 000	135 000	155 000
Nissan	23 520	96 500	113 100	124 000	102 000	134 400
Honda	8 220	39 000	70 000	80 000	120 000	120 000
Hino	9 600	9 600	9 600	28 800	28 800	28 800
DaimlerChrysler	2 340	4 600	14 900	18 100	16 300	16 300
YMC Assembly	12 000	12 000	12 000	12 000	12 000	12 000
Volvo	6 000	6 000	6 000	6 000	10 000	10 000
BMW	–	–	–	–	10 000	10 000
Total	160 280	485 900	901 200	1 063 700	1 255 100	1 576 500

Source: Thai Automotive Industry Association.

Note: Dashes indicate information that is not available.

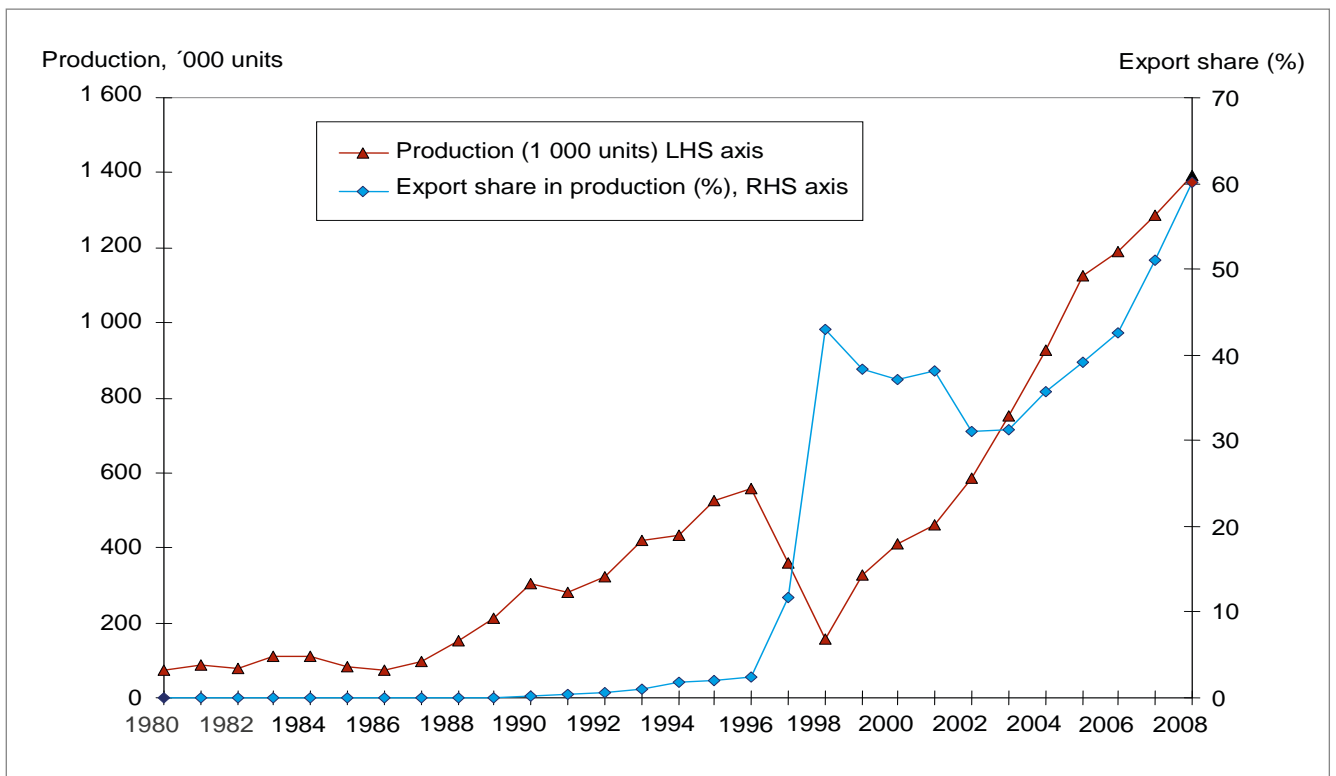
Table 5: Production capacity of carmakers classified by type of vehicles, 2006

	Passenger cars	Commercial vehicle	One-tonne pick-ups	Other cars	Total
	(1)	(2)=(3)+(4)	(3)	(4)	(5)= (1)+(2)
Toyota	200 000	250 000	200 000	50 000	450 000
Mitsubishi	50 000	230 000	150 000	80 000	208 000
Isuzu	–	200 000	180 000	20 000	200 000
General Motor	40 000	120 000	120 000	–	160 000
Auto Alliance	–	155 000	150 000	5 000	155 000
Nissan	36 000	98 400	96 000	2 400	134 400
Honda	120 000	–	–	–	120 000
Hino (Suzuki)	–	28 800	–	28 800	28 800
Daimler Chrysler	16 300	–	–	–	16 300
YMC Assembly	12 000	–	–	–	12 000
BMW	10 000	–	–	–	10 000
Volvo	10 000	–	–	–	10 000
Total capacity	494 300	1 082 200	896 000	186 200	1 576 500
(% share)	(31)	(69)	(57)	(12)	(100)

Source: Thai Automotive Industry Association.

Notes: Number in parenthesis is percentage share of total production capacity. Dashes indicate information that is not available.

Figure 5: Volume of vehicle production and share of vehicle exports, 1961-2008



Source: Based on data provided by the Thai Automotive Association.

Table 6: World motor automobile production – top 20 producing countries, 2000 and 2008

Rank	2000			2008		
	Country	Production, ('000 units)	Share (%)	Country	Production, ('000 units)	Share (%)
1	United States	12 800	21.9	Japan	11 564	16.4
2	Japan	10 141	17.4	China	9 345	13.3
3	Germany	5 527	9.5	United States	8 705	12.3
4	France	3 348	5.7	Germany	6 041	8.6
5	Republic of Korea	3 115	5.3	Republic of Korea	3 807	5.4
6	Spain	3 033	5.2	Brazil	3 220	4.6
7	Canada	2 962	5.1	France	2 569	3.6
8	China	2 069	3.5	Spain	2 542	3.6
9	Mexico	1 936	3.3	India	2 315	3.3
10	United Kingdom	1 814	3.1	Mexico	2 191	3.1
11	Italy	1 738	3.0	Canada	2 078	2.9
12	Brazil	1 682	2.9	Russian Federation	1 790	2.5
13	Russian Federation	1 206	2.1	United Kingdom	1 650	2.3
14	Belgium	1 033	1.8	Thailand	1 394	2.0
15	India	801	1.4	Turkey	1 147	1.6
16	Poland	505	0.9	Islamic Republic of Iran	1 051	1.5
17	Czech Republic	455	0.8	Italy	1 024	1.5
18	Turkey	431	0.7	Poland	951	1.3
19	Thailand	412	0.7	Czech Republic	946	1.3
20	Chinese Taipei	373	0.6	Belgium	724	1.0
Total	Top 20	55 379	94.9	Top 20	65 053	92.2
Total	World	58 374	100	World	70 527	100

Source: Thai Automotive Industry Association.

EXPORT TRENDS AND PATTERNS

The first motor vehicle exports from Thailand by MMC Sittipol, the Mitsubishi affiliate, were in 1988. However, until the late 1990s the Thai automotive industry remained heavily domestic market oriented, with exports on average accounting for less than 5% of total sales. Export volume measured in units recorded an over five-fold increase between 2000-2008, from 153,000 to 838,000 units. In monetary terms, this increase was even greater, from US\$ 2.8 billion to US\$ 195 billion, reflecting a shift in exports towards higher-value items. Automobile exports' share of total exports from Thailand increased from 1.5% in the 1990s to 13% in 2008 (see figure 6).

In the 1990s, parts and components accounted for over 75% of total automobile exports. Since then, this share has declined sharply reflecting a shift in exports toward completely built vehicles. However, parts and components still account for about 20% of total exports (see figure 7).

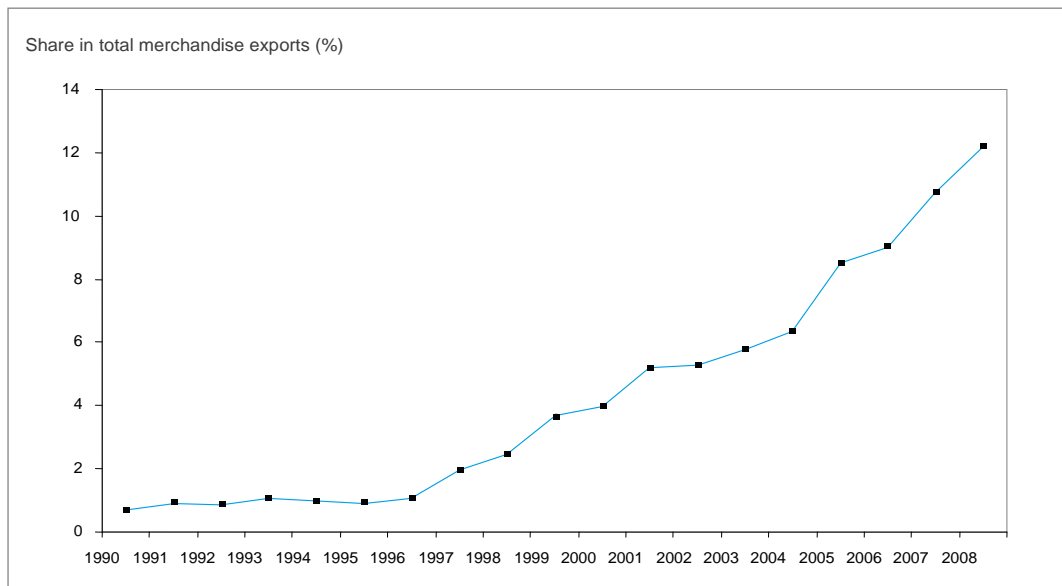
Table 7 provides data on the composition of vehicle exports. One-tonne pick-ups remain the dominant type among

exported vehicles. However, between 1999-2007, their share in export value has declined sharply from 74.6% to 42.6%. Smaller passenger cars (1,000-1,499 cc.) accounted for the export share gains. The share of larger passenger cars (1,500-3,000 cc.) has also increased.

Since the early 1990s, automobile exports from Thailand have undergone notable geographic changes (see table 8). Most significant is the sharp increase in the market share of ASEAN-10 countries – from 6.7% during 1999-2001 to 20% during 2006-2007. This increase likely reflects preferential tariff access to these markets. However, extra-regional exports still account for most of total motor vehicle exports, with a notable shift from the EU-15 Member States to other countries, especially the Middle East.

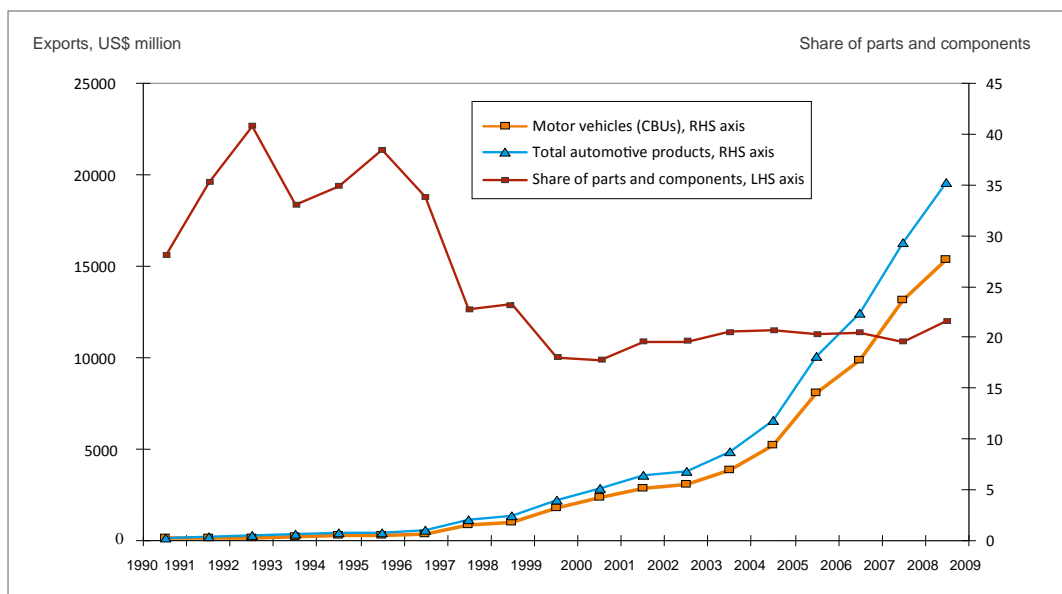
Exports to Japan and the United States account for a tiny share in total exports. Japan's share is consistent with the export patterns for other manufactured exports from Thailand and other countries in the region, and reflects the pattern of Japanese firms using production in other East Asia countries to export to third country markets.¹⁵ The small export share to the United States is understandable because all major international carmakers have production

Figure 6: Share of automotive exports in total merchandise exports from Thailand, 1990 to 2008



Source: International Trade Centre, based on data compiled from UN Comtrade Database.

Figure 7: Automobile exports from Thailand, 1990-2009



Source: International Trade Centre, based on data compiled from UN Comtrade Database.

plants in the United States and/or use production bases in Latin America, particularly in Mexico, to serve the American market.

lifting the automobile industry's share in GDP to about 8% by 2008. Automotive industry employment has grown over time, but at a slower rate, from about 3.3% in the 1990s to 4.5% – around 350,000 workers – in 2008.

THE INDUSTRY'S GROWING ROLE IN THE ECONOMY

From 1960 until the late 1990s, automotive industry growth in Thailand was compatible with that of the manufacturing sector. The ensuing years have seen much faster growth,

The gap between output and employment reflects the relatively high capital intensity of the automobile industry compared to the average in total manufacturing. The value added per worker is a rough indicator of capital intensity of production. This value added per worker in transport equipment manufacture is about three times that of total manufacturing.¹⁶

Table 7: Automobile exports and imports classified by vehicle type, 1999-2007

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Export (US\$ million)	1 275	1 627	1 924	1 968	2 649	3 858	5 198	6 648	8 227
<i>Percentage share</i>									
Passenger car 1 000-1 499 cc.	1.1	1.4	1.2	2.5	14.1	16.1	9.4	8.8	7.9
Passenger car 1 500-3 000 cc.	7.1	8.8	21.9	14.9	14	10.4	18.9	22.7	23.3
One-tonne pick-ups	74.6	70.7	54.9	61.1	55.5	54.9	44.1	47.1	42.6
Import (US\$ million)	558	526	382	417	618	608	795	772	1 013
<i>Percentage share</i>									
Passenger car 1 500-3 000 cc.	60.9	33.4	39.8	27.1	50.3	34.5	33.0	23.8	18.6
Passenger car larger than 3 000 cc.	5.4	8.8	8.5	12.9	9.9	8.8	5.6	5.8	4.2
Bus	7.9	18.6	13.2	18.4	11.8	17.1	28.9	28.9	32.7
Truck	5.3	11.8	15.3	14.7	6.8	7.1	5.4	5.4	7.3

Source: International Trade Centre, compiled from UN Comtrade Database.

Notes: Passenger cars 1,000-1,499 cc., 1,500-3,000 cc. and greater than 3,000 cc. are referred to HS870322, 870323 and 870324, respectively. One tonne pick-up truck is HS870421 whereas bus and truck are HS8702 and 8704, respectively.

Table 8: Direction of automobile exports from Thailand, 1999-2007 (%)

	ASEAN-10	Indonesia	Philippines	Australia	Japan	United States	EU-15	Others	Total (US\$ million)
1999-2001									
Passenger cars	11.9	1.5	0.1	14.8	9.7	0.0	45.4	62.3	353.1
Trucks	4.5	0.2	0.7	23.8	0.1	0.0	41.8	71.6	1 266.7
Others	73.6	3.1	1.1	1.5	0.3	5.3	3.1	24.1	14.2
Total	6.7	0.5	0.6	21.7	2.2	0.1	42.2	69.2	1 634.1
2002-2005									
Passenger cars	50.1	21.3	10.6	14.9	7.8	0.0	9.5	26.3	1 134.4
Trucks	6.8	2.7	0.9	23.0	0.2	0.0	32.4	70.1	2 223.2
Others	77.4	1.0	0.4	1.4	0.5	1.0	2.0	20.4	26.0
Total	21.8	8.9	4.1	20.1	2.7	0.0	24.5	55.0	3 383.5
2006-2007									
Passenger cars	34.3	10.7	9.6	29.9	1.6	0.2	1.8	34.2	3 387.7
Trucks	5.8	2.5	1.0	18.6	0.2	0.0	27.5	75.4	3 990.3
Others	77.6	2.2	0.1	16.2	0.5	0.2	0.7	5.6	59.7
Total	19.4	6.2	4.9	23.7	0.9	0.1	15.6	56.0	7 437.6

Source: International Trade Centre, compiled from UN Comtrade Database.

There is a major debate in Thailand on the extent to which the growth of the auto industry has added value to the national economy. Many studies in the early 1990s estimated very low value added, less than 20%.¹⁷ However, firm level surveys suggest that value added would have significantly increased during the ensuing years as the local production of parts and components has rapidly increased in line with output expansion. More than 90% of parts and components in locally assembled cars are now sourced locally, although the import content of some automotive components is still high.

Data needed for precise estimates of domestic value added are hard to come by. However, some idea about the overall trends in domestic value added in line with output expansion can be obtained by looking at the co-movement of parts and components imports and domestic automobile production. One way of doing this is to calculate the real value of parts and components imports – after adjusting import value for changes in prices – per unit of local production per locally assembled vehicle.

The real US dollar value of parts and components per vehicle at 1988 prices has declined sharply from about US\$ 8,500 in the early 1990s to around US\$ 2,000 in 2007. This pattern is consistent with the findings from the firm level survey. The rate of decline is much sharper during the period after the abolition of LCR requirements compared to the preceding period. This suggests that the market-driven process of localization of the auto industry has yielded a much better outcome compared to the outcome of the LCR regime.

THAILAND'S POSITION IN PRODUCTION NETWORKS

The data summarized in table 9 shows the relative importance in Thailand of individual carmakers and Thailand's relative importance as a production base for these firms in their global operations. Japanese automakers dominate automobile assembly in Thailand, accounting for over 80% of total output. The two largest American carmakers – General Motors and Ford – accounted for a mere 7.5% of total production in 2008.¹⁸ Production in Thailand accounted for about one-fifth of total automobile production by Japanese firms in Asian countries, excluding Japan. However, Thailand accounts for a much smaller share of the total global production of Japanese firms, at 4.1% in 2008. For the American firms, the share is less at 0.8%.

For all carmakers listed in figure 8, Thailand is the regional production base for one-tonne pick-ups. These firms use a platform production strategy to produce one-tonne pick-ups for more than 100 countries. In the platform production strategy, automakers use a small number of under-body platforms as the basis for a greater number of vehicle models. This strategy reduces the costs of platform development and enables component sharing among models. For example, platform sharing between Chrysler

and Mitsubishi allowed Mitsubishi to reduce its number of light-vehicle platforms from 12 to six. Honda Odyssey and Accord share the same platform, as do Ford Everest and Mazda Fighter.

What is the role of Thailand in global automobile production networks? Figure 8 helps answer this question. Toyota, which has continuously accounted for the largest share in production in Thailand of both passenger cars and pick-ups, uses the country as a production and export base of small-to-medium passenger cars and one-tonne pick-ups. Toyota exports the cars mostly to Southeast Asian countries, Australia and New Zealand. Toyota exports pick-ups primarily to Europe.

Passenger cars manufactured by Honda in Thailand are exported to other Southeast Asian countries, whereas Honda Stream is produced in Indonesia and exported to other countries in the region, including Thailand. Ford and Mazda use their production base in the Philippines for producing passenger cars – Ford Laser, Ford Escape, Mazda Protégé, and Mazda Tribute – for the other countries in the region, including Thailand.

LINKAGES: ASSEMBLER AND PARTS SUPPLIERS

As global competition intensifies, multinational carmakers increase local parts procurement to strengthen their international competitiveness. Many vehicle parts have high weight-to-value ratios and some are bulky. Therefore, there is substantial cost in procuring parts from distant suppliers. Close cooperation between manufacturers and parts suppliers is also needed to match production plans and delivery schedules to ensure just-in-time production while maintaining quality. Local procurement also reduces exposure to exchange rate risk. These considerations explain the tendency for geographic clustering of the automobile industry, with car assemblers at the centre surrounded by part suppliers.

According to ADC records there are 1,454 indigenous part suppliers in Thailand. Of these, 354 are first-tier suppliers, while the rest operate at the second- and third-tier in the supply chain. The first-tier suppliers design and manufacture modules, not just individual parts and components. They deal directly with car manufacturers. Second- and third-tier suppliers produce parts and components for first-tier suppliers.

Currently there are about 10 local firms among the first-tier suppliers that are truly involved in design and manufacture modules. The other local firms manufacture simple inner body parts. Prior to the abolition of ownership restriction on foreign affiliated firms in 1997, there were many more first-tier local suppliers operating under technology licensing agreements with foreign part producers. Since then, the technology owners have taken over most of these local firms.

Table 9: Automobile (CBU) production¹ in Thailand classified by carmakers, 2000 and 2008

	2000				2008			
	Production		Thai share in Asian production ² (%)	Thai share in world production ³ (%)	Production		Thai share in Asian production ² (%)	Thai share in world production ³ (%)
	Units ('000)	(%)			Units ('000)	(%)		
Japanese carmakers	239	58.1	23.0	1.1	1 135	81.4	20.8	4.1
Toyota	63	15.3	21.1	1.1	573	41.1	34.6	6.2
Honda	36	8.7	25.1	1.4	162	11.6	20.3	4.1
Nissan	19	4.6	20.2	0.7	74	5.3	14.0	2.2
Mazda	30	7.3	68.9	3.2	48	3.5	30.1	3.6
Mitsubishi	91	22.1	19.8	5.0	173	12.4	57.6	13.1
Isuzu	67	16.3	39.6	12.4	135	9.7	64.7	25.1
US carmakers	9	2.1	22.1	22.1	105	7.5	4.5	0.8
GM	9	2.1	22.1	0.1	104	7.5	5.2	1.3
Ford ⁴	–	–	–	–	1	0.1	0.3	0.0
Other	164	39.9	1.7	0.6	153	11.0	1.6	0.5
Total	412	100.0	3.1	0.7	1 394	100	8.0	2.0

Source: Compiled from the International Automobile Association database (<http://www.oica.net/>).

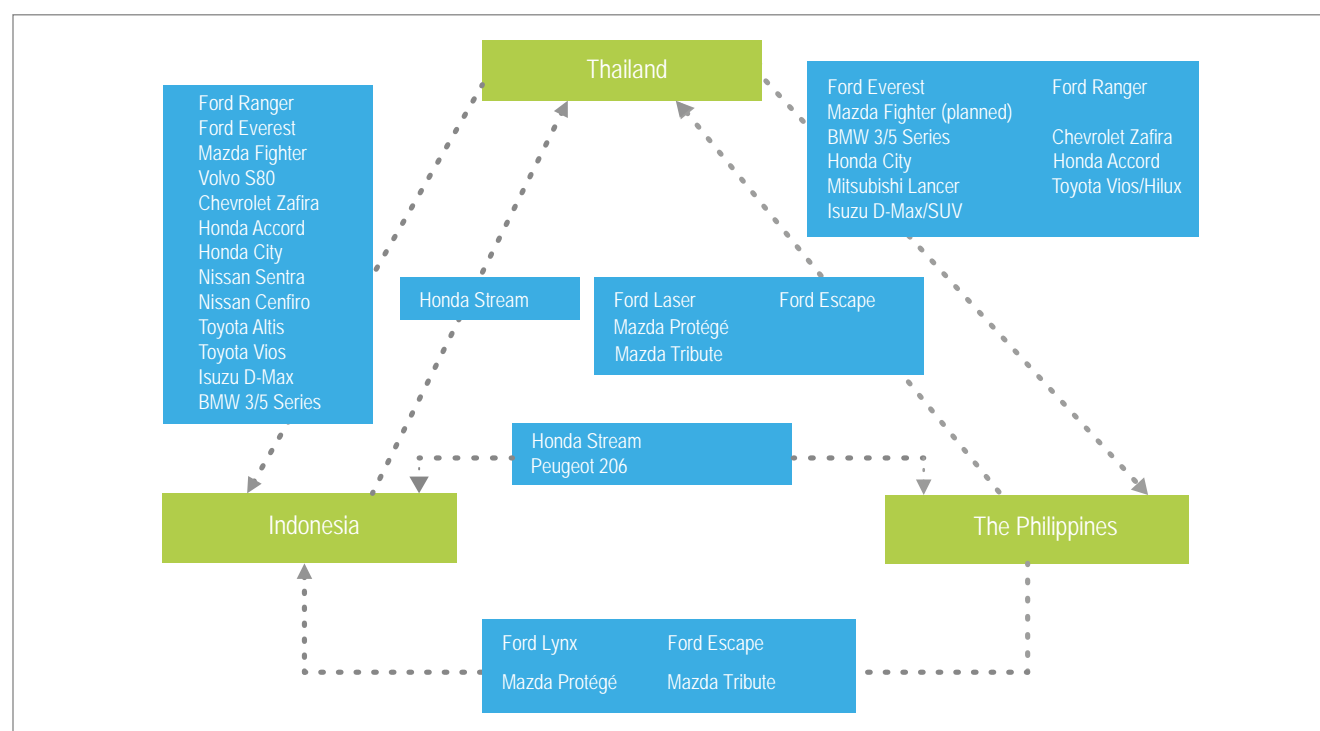
Notes: 1. Production comprises passenger cars and commercial vehicles, including light commercial vehicles, heavy commercial vehicles and heavy bus and coach.

2. Excluding Japan.

3. Including production in the source country of the carmaker.

4. Ford not in production where dashes appear.

Figure 8: Pattern of regional division of labour of the automotive industry in Southeast Asia



Source: Firm interviews.

The dominance of MNEs at the first-tier of the supply chain is not unique to the Thai auto industry. The phenomenon of foreign firms consolidating their position at the first tier of the supply chain has become integral to the globalization of auto industry.¹⁹ For example, by the late 1990s in Brazil there was only one locally owned firm among the 13 largest component producers.²⁰ In the Republic of Korea, many large auto part firms were taken over by Western first-tier suppliers after the 1997-1998 financial crisis.²¹ Given concerns about protecting proprietary assets in cutting edge technology in a highly competitive market, wholly owned affiliates have become the preferred mode of international operation for MNE auto part producers.

The fact that only a few indigenous suppliers have been able to maintain their OEM status suggests that the LCR regime during the 1970s and 1980s failed to have a significant, lasting and positive impact on local part suppliers. However, the LCR regime and other protection measures helped local suppliers gain technological capability. The relevant issue is whether such protection measures can lay the foundation for sustainable development of a local auto parts sector. The Thai experience suggests that these measures were insufficient to build up the technological capability of local suppliers and allow them to benefit from the gains of dynamic economies.

Evidence from firm level interviews suggests that the success of the few local OEM producers has come not from the protection provided by LCR measures, but from their ability to forge links with the car assemblers whose production strategy shifted in the late 1980s towards exports. The expansion of production in these firms began in earnest only from the mid-1990s when policy reforms, in particular the removal of LCR, enabled them to forge links with world class part makers.

At the initial stage of global integration, opportunities seem limited for purely local firms to become OEM suppliers on their own within MNE-dominated production networks without forging links with MNE part suppliers. Their activities will be heavily concentrated at the second and third tiers until they gain technological expertise and establish themselves as quality providers. The few local OEM suppliers are currently concentrated in the production of auto-body parts. Car assemblers normally design body-related parts because they are directly related to the appearance of the vehicle. Production of these parts does not require a high level of technological capability.

However, there are indications that the local OEM suppliers and some local firms involved at the second tiers have begun to move up the technology ladder. For instance, Thai company Aapico has emerged as one of the world's best suppliers of low-volume tooling. A recent study of procurement practices found many cases of Japanese automakers and first-tier firms expanding procurement of high-tech parts from second-tier Thai firms.²²

The number of local firms joining the automotive production chain at the second and third tiers has significantly

increased over the past decade or so. They are involved in the production of standard parts and components, as well as intermediate inputs such as plastics, textile products and leather products. Growth prospects in these product lines seem promising because of the high growth of vehicle production and the increased local content of locally assembled vehicles. Evidence from interviews suggests that knowledge and technology transfer from OEM firms and final assemblers to lower tier suppliers have accelerated as the auto industry becomes increasingly globally integrated.

WHAT DROVE THAILAND'S SUCCESS?

There is no single explanation for the recent, rapid export-oriented growth in the Thai automotive industry. It has been underpinned by a combination of restructuring and geographic change in the industry and pragmatic policy that made Thailand attractive for international production. The size of the domestic market, which enabled automakers to gain economies of scale, also played an important role.

GLOBAL SHIFTS IN THE INDUSTRY

Over the past two decades, there has been a massive transformation in the structure, conduct and performance of the global automotive industry, opening opportunities for countries in the periphery to join the global production network. Until the mid-1980s, automotive firms predominantly engaged in multi-market operations by setting up production bases in individual countries to serve those markets.

Since then, the industry has become increasingly globally integrated in the sense that manufacturing, sourcing and marketing have become increasingly multinational. Production standards have become increasingly universal, accompanied by a shift in production processes from generic to modular technology.

Consequently, parts and components production has grown rapidly to cater for multiple assemblers. In this context, intense competition among carmakers has transformed the industry's geographic spread beyond mature industrialized countries. The search for low-cost production sites has led to the establishment of production plants by automotive MNEs in peripheral countries.

The global spread of the automotive industry has been aided by a shift in global demand patterns. In recent years, the markets in North America, Western Europe and Japan have been rapidly approaching the saturation point. In contrast, growth perspectives for vehicle sales are increasingly promising in emerging economies. This shift in demand patterns has led auto MNEs to set up new assembly bases to serve regional markets. With this regional focus, carmakers tend to consolidate their assembly facilities

within a region. They must decide which models to produce at which locations, at what prices and quality standards, and for which markets – regional or global?

FAVOURABLE, STABLE POLICY ENVIRONMENT

Thailand benefited from the global spread of the auto industry due to its market-oriented policies during the import substitution era and its subsequent, well-timed policy transition towards greater outward orientation.

During the import substitution era, Thai policy was similar to that in other developing countries. However, Thai policy remained relatively more liberal and stable than in Malaysia, Indonesia, the Philippines and many other developing countries. Thailand never had an explicit goal to promote a national car, as in Malaysia or Indonesia. The then-president of Toyota Motor Thailand stated in 1999: 'Thailand is the best candidate for hub status because it has no national car policy and offers a level playing field for both local and foreign firms.'²³

At the same time, Thailand did not have an explicit target for localizing parts and component production. Thai authorities adopted a consensual approach to setting LCR targets in consultation with automakers. The single case of an explicit LCR programme, the One-Tonne Diesel Engine project, was carefully designed in consultation with the private sector stakeholders. At the same time, policy uncertainty from frequent reversal of policy direction was much lower in Thailand compared to Indonesia and the Philippines.

The Automobile Development Committee provided an effective institutional setting for government officials to formulate policies in consultation with firms and business organizations. Interference of political leaders and top-level policymakers was virtually absent in the decision-making process.²⁴ The fragmented nature of political parties and frequent changes in governments prevented any political group or private firm from influencing sector agencies on a permanent basis. Moreover, the role of the state in designing industrial policy was not orchestrated by a planning agency with direct allocation control of economic resources. In this political setting, a consensual approach to policymaking and absence of abrupt policy shifts created stable expectations and confidence in the business environment. Because formulating policy was based on government-private sector consensus, there were no abrupt policy shifts.

By design or by sheer luck, the Thai Government's liberalization of the automotive industry from the late 1980s coincided with the structural shift in the industry towards the production of a 'global car'. Thailand benefited from a first mover advantage in attracting global players to set up production bases in the country. Abolishing LCR and ownership restriction on local affiliates of foreign firms set the stage for linking the domestic industry to global production networks. Eliminating these restrictions prompted and facilitated MNE automakers and part suppliers to set up

new affiliates and to bring more cutting edge technology to the affiliates in Thailand.

An important aspect of the performance of the Thai auto industry that requires clarification is the coexistence of high tariff protection, which implies an anti-export bias, and rapid export growth. Despite some recent reductions, tariffs on completely built automobiles remain much higher than tariffs on other imports. Moreover, given the cascading nature of the tariff structure, the rate of effective protection for domestic automotive assembly is higher than the average applied nominal rate.

Why has this anti-export bias not been a deterrent to rapid export growth? A possible explanation is that export expansion has been predominantly driven by MNEs that set up production plants in Thailand to produce for the global market, not just for the Thai market. The conventional argument for removing anti-export bias as a precondition for export expansion is based on the assumption that exporting is an act of domestic firms. The marketing decisions of these domestic firms are driven by the relative profitability of exporting compared to selling in the domestic market. Relative profitability in selling in the domestic market is not a binding consideration for an MNE involved in manufacturing, sourcing and marketing within a global production network. At the same time, firms involved in export production in Thailand have access to both imported and locally procured intermediate inputs at world market prices.²⁵

So far this case study has examined Thai trade and investment policy relating to the automotive industry. However, a sound trade and investment policy regime is a necessary – but not a sufficient condition – for successful global economic integration. Equally important is the conduciveness of the overall economic environment for doing business. International competitiveness requires high-quality hard and soft infrastructure, especially for successful participation in time-sensitive global production and purchasing networks. Labour markets need to reflect underlying supply and demand conditions, with wage growth and differentials driven by productivity.

Prudent macroeconomic management is required to provide a stable and predictable commercial policy environment and to ensure that exchange rates do not impair competitiveness. Above all, political stability and policy certainty figure prominently among pre-requisites for profitable long-term investment, particularly in the site selection decision of MNEs.

In recent years there have been various attempts to assess the comparative attractiveness of business environments in individual countries on the basis of investor surveys or other subjective assessments. Thailand scores consistently high in the World Bank's *Doing Business 2009* survey, which has the widest country coverage among the alternative databases.²⁶ Thailand ranks 13th of the 181 countries covered in this survey. Among Asian countries, only Singapore, Hong Kong SAR and Japan rank higher than Thailand.

Thailand's macroeconomic policy has been largely consistent with the country's commitment to outward-oriented development strategy. Thailand, along with its high-performing counterparts in East Asia, has never experienced episode of hyperinflation and massive exchange rate misalignment as seen in most countries in Latin America and Africa.

DOMESTIC MARKET SIZE MATTERS

For MNEs, the size of the domestic market is an important consideration in the site selection process. Domestic market size was more important when location decisions were driven by import substitution considerations. However, even in the modern era of globally integrated production networks, domestic market size matters in achieving economies of scale. The cost of domestically produced parts is also inversely related to the size of the domestic market.

Thailand has the largest domestic market for automobiles in the region (see tables 10 and 11). For the past two decades, annual vehicle sales in Thailand have ranged from about 300,000 units to 500,000 units, accounting for over 40% of the total sales in the ASEAN-4 countries, followed by Indonesia (27%), Malaysia (22%) and the Philippines (10%). A market that can absorb 40,000 to 50,000 units is generally considered of sufficient size for achieving economies of scale for a given car model.

The one-tonne pick-up truck, given its particular appeal in Thailand for farmers and urban vendors, met this criterion by the mid-1980s. Total domestic sales of pick-up trucks were 85,000 in 1985 and almost 250,000 in 2008. This vehicle model has been the prime mover of rapid expansion of automotive exports from Thailand.²⁷ Thailand is now the world's second largest producer – after the US – and the largest exporter of one-tonne pick-up trucks.

CONCLUSION

Over the past two decades, Thailand has emerged as a hub of vehicle production for the regional and global markets. Rapid expansion in auto industry has spawned a parts and components supplier network in the country, resulting in an impressive increase in local content in Thai-made cars. Thai success in automotive production has been underpinned by a favourable combination of four factors:

- Structural changes in global auto industry that permitted countries in the periphery to join production networks for the global and regional markets;
- Pragmatic, market-oriented policies that enabled the domestic auto industry to evolve with trends in the wider global economy;
- The size of the Thai market that met the requirements of domestic car assembly – in particular the one-truck pick-up truck – to achieve economies of scale;
- Extensive consultation with private sector stakeholders.

The policy instruments used by Thai authorities during the import substitution era were basically the same as those used by their counterparts in other developing countries: tariff protection to entice MNEs to set up production plants for the domestic market and LCR to force these plants to forge backward linkages with local auto part makers. However, Thai policymakers implemented these policies in a market-oriented manner in consultation with automakers and other private sector stakeholders.

This pragmatic approach was instrumental in winning investor confidence and thus laying a solid foundation for building a world-class production base. Unlike Malaysia and Indonesia, Thailand never pursued a national car policy; both foreign and local companies were treated on an equal footing.

Thailand became a regional hub by the timely abolition of LCR and ownership restrictions on affiliates of foreign companies. Thailand was the first developing country member to honour WTO commitments. These reforms, undertaken when the auto industry was beginning to go global, played a pivotal role for the domestic auto industry to become a part of global production networks.

Tariff protection on auto imports remained high, but this did not constrain auto exports. This is because the domestic auto industry, which was dominated by foreign subsidiaries, had become a global production network, no longer serving only the domestic market. Thus, the size of the domestic market, which enabled automakers to gain scale economies, also played a role. Expansion of domestic sales, benefiting from tariff protection, and expansion of export at a faster rate driven by the competitiveness of domestic production within the wider global production networks are not mutually exclusive in a globalized auto industry.

Both car manufacturing and component production are dominated by foreign firms, with most purely local firms involved in the production network as second-tier and third-tier suppliers of simple, diffused technology parts and components. However, this has not made a case for government intervention to promote local interest. Increased foreign involvement in both car assembly and parts production has been a universal phenomenon driven by a structural shift in the auto industry from the traditional multi-market mode of production to a globally integrated system of production.

In the new era of the 'global car', strategic alliances forged between the key players in the industry and firms of different national origin have become the norm of cross-border operation. This does not imply that Thai companies lack the ability to move up the production ladder as they acquired expertise and technological capabilities.

Table 10: Domestic automobile sales in Indonesia, Malaysia, the Philippines and Thailand, 1980–2005 ('000 units)

	Indonesia	Malaysia	Philippines	Thailand	Total
1980	172	101	56	89	418
1985	144	107	7	86	344
1990	275	186	58	304	823
1991	261	200	48	268	778
1992	170	145	61	363	738
1993	211	155	84	456	905
1994	321	200	103	486	1 111
1995	379	285	128	572	1 364
1996	332	365	162	589	1 448
1997	387	405	144	364	1 299
1998	58	164	80	144	446
1999	94	288	74	218	674
2000	105	200	120	262	687
2001	180	240	140	298	858
2002	202	300	160	340	1 002
2003	300	340	185	450	1 275
2004	400	503	251	691	1 842
2005	424	511	246	739	1 920

Source: Data for Thailand are from Thailand's Automotive Industry Directory 2003 to 2004, and data for other ASEAN countries from Guilheux and Lecler (2000: p. 226) and Standard and Poor (S&P) (2000). The forecasted data are from Fourin (1998).

Notes: Total is the sum of vehicle sales of Indonesia, Malaysia, the Philippines, and Thailand. Data for 2000–2005 are the forecast except for Thailand in 2000 to 2001.

Table 11: Domestic vehicle sales in Thailand classified by vehicle type, 1990-2008 ('000 units)

	Total	Passenger cars	Commercial vehicles						
			Total	Vans and buses	1 tonne pick-ups	2-4 tonne trucks	Trucks over 4 tonnes	Less than one tonne	Other
1990	304	66	238	7	168	16	32	12	4
1991	269	67	202	8	155	10	16	10	3
1992	363	121	242	10	183	12	18	14	4
1993	456	174	282	12	224	13	16	14	4
1994	486	156	330	13	258	14	22	20	3
1995	572	163	408	12	324	16	32	16	5
1996	589	173	416	13	328	17	32	15	13
1997	363	132	231	8	188	9	11	6	8
1998	144	46	98	3	81	3	4	3	4
1999	218	67	151	4	130	4	3	3	7
2000	262	83	179	6	152	5	5	4	8
2001	297	105	192	7	169	4	4	3	6
2002	409	126	283	8	241	5	6	2	22
2003	533	179	354	8	309	7	11	1	16
2004	553	184	369	9	326	8	13	1	10
2005	703	188	515	13	470	12	14	–	5
2006	682	195	487	13	329	10	13	1	–
2007	631	183	448	18	286	10	12	2	–
2008	614	239	375	16	246	7	10	7	–

Source: Data downloading from Thailand Automobile Institute website at www.thaiauto.or.th/index_eng.asp.

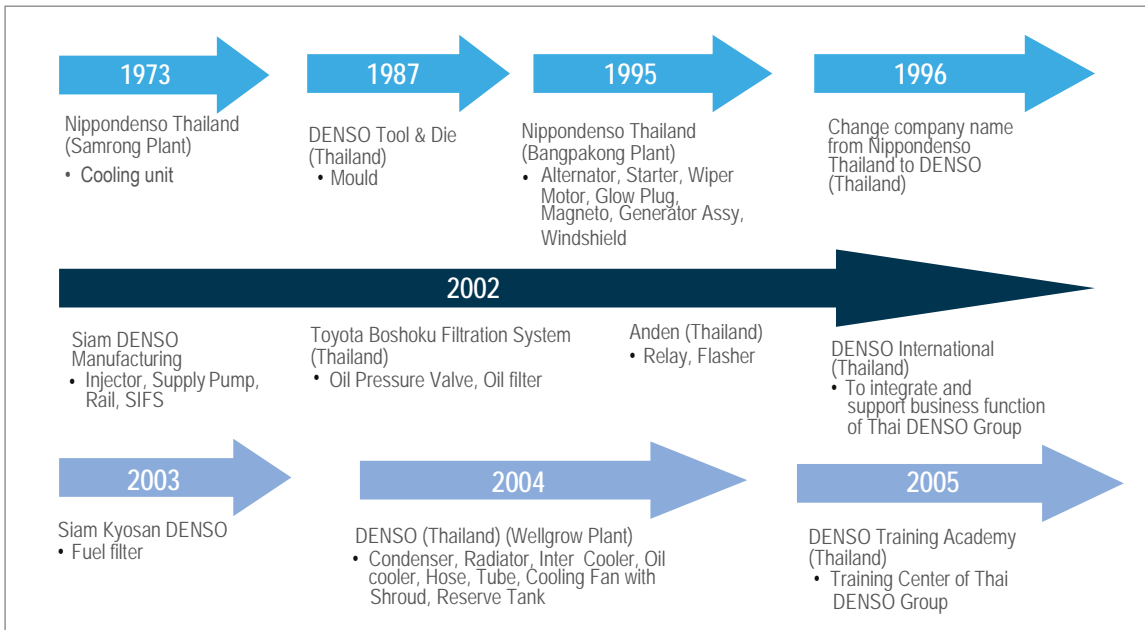
Note: Dashes indicate information that is not available.

ANNEX I: CHARTING TRADE AND INVESTMENT POLICIES 1960-2008

1961	1960 Industrial Investment Promotion Act provides incentives for the local assembly of automobiles.
1962	1962 Industrial Investment Promotion Act announced 50% reduction in tariffs on CKD kits: new rates, passenger cars 30%; pick-ups 20%; and trucks 10%.
1969	Ministry of Industry sets up Automotive Development Committee (ADC). 20% increase in tariffs on CBU vehicles: new rates, passenger cars 50%; pick-ups 40%; and trucks 30%.
1971	MOI restricts the number of locally assembled passenger car, pick-ups and trucks models. Announces LCR measures to become effective in 1974: domestically assembled vehicles to use locally produced parts at least 25% of the total value of the vehicle.
1976	An import duty rebate scheme for export producers comes into operation.
1978	Ban of CBU imports and increase of import duty on CKD kits to 80%. Suspends approval of new assembly plants to reduce over capacity. Tariffs of CBU passenger cars and CKD passenger cars increased to 150% and 80% respectively.
1982	LCR requirement for all vehicles set at 45%.
1983	The duty rebate scheme (introduced in 1977) supplemented by outright import duty exemption for intermediate inputs imported by export-oriented firms (firms exporting more than 30% of total output) approved by the BOI.
1983	Intermediate inputs imported by export-oriented firms (firms exporting more than 30% of production) approved by the BOI exempted from import duties.
1985	Mandatory local-content list imposed. Ban on imported CBU vehicles with engine capacity over 2,300 cc. lifted.
1986	LCR for passenger cars increased to 54%. List for compulsory and non-compulsory parts introduced.
1989	Ceiling on production capacity of existing assembly plans lifted.
1990	Restrictions on domestic production of series and models abolished. Quantitative import restriction (including the ban on imports of CBUs under 2.3 litres) on passenger cars replaced with tariff.
1991	Tariffs on all types of CBUs and CKD kits reduced: - CBUs over 2.3 litres from 300% to 100%. - CBUs under 2.3 litres from 180% to 60%. - CKDs for cars, pick-ups and vans from 112% to 20%. Use of locally produced diesel engines for 1-tonne pick-up trucks required.
1992	Pick-up trucks exempted from excise tax.
1993	Ban on new assembly plants lifted.
1994	Supply of parts and components by domestic firms to automotive assembly for export exempted from all domestic taxes as part of government policy to facilitate development of backward linkages of auto industry.
1995	CKD tariffs reduced from 20% to 2%.
1997	Local ownership requirement on foreign-invested projects abolished (announced 1993; implemented 1997). Implication/streamlining of customs procedures for facilitating importation of intermediate inputs used in production for export commenced.
1999	Tariffs on CKD vehicles raised from 20% to 30%-35% to cushion against the potential adverse impact of impending LCR abolition.
2000	LCR requirement abolished. The WTO Agreement on Customs Valuation comes into operation.
2003	Tariff preferences under the ASEAN Free Trade Agreement (AFTA) come into full effect: import duties applicable to intra-ASEAN trade down to 0-5%.
2004 - 2008	No significant changes.

Source: Compiled from various government policy reports and press releases.

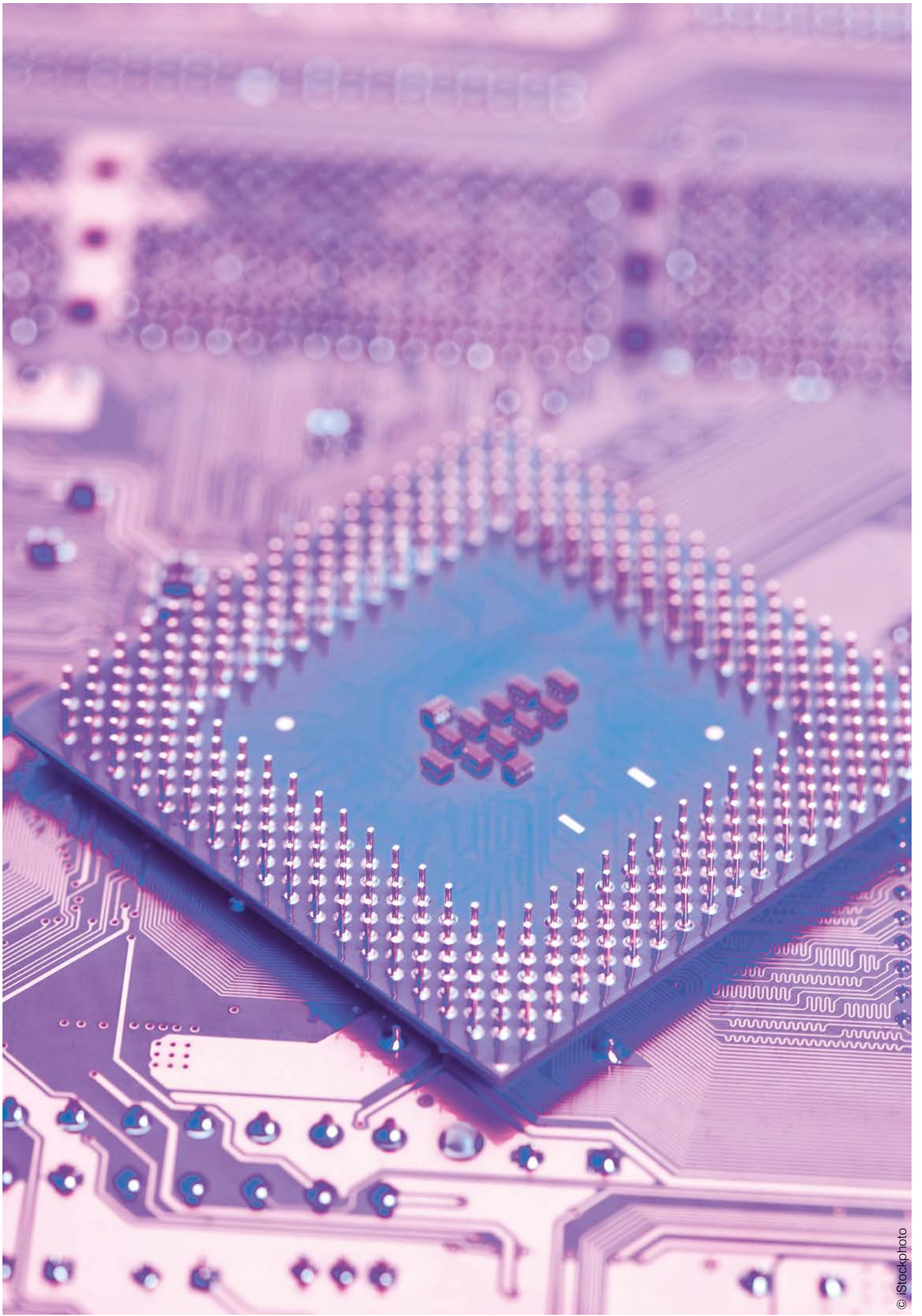
ANNEX II: THE EVOLUTION OF THE DENSO AFFILIATE IN THAILAND, 1973-2005



Source: Compiled from Company Profile.

ENDNOTES

1. *Thailand: Country Profile 2008*, p. 21, Economist Intelligence Unit, London 2008.
2. The term 'automotive industry' refers to the assembly and production of parts and components of passenger cars and commercial vehicles. Motorcycles are excluded from the product coverage.
3. The first survey was carried out in 2006 by A. Kohpaiboon as part of his doctoral research. The second survey was carried out by a research team he led as part of an International Labour Organization-funded research project in 2010.
4. A completely knocked-down product or machine is in several pieces and needs to be put together before it can be used.
5. Business ventures set up without BOI approval were not eligible for investment incentives or to own land. For these reasons almost all major multinational enterprise (MNE) affiliates operating in the country have been set up under BOI approval.
6. As part of the new policy, the Government rationalized the output mix of local production by setting limits by models and engine sizes as well as minimum capacity limits on individual assembly plants. However, this rationalization policy lasted only six months.
7. Doner, Richard F., *Driving a bargain: automobile industrialization and Japanese firms in Southeast Asia*, Berkeley, University of California Press, 1991.
8. Data on Thai auto industry reported in this paper, unless otherwise stated, come from Thailand Automotive Institute website: http://www.thaiauto.or.th/index_eng.asp.
9. *Trade Policy Review: Thailand*, pp. 115-116, World Trade Organization, 2007.
10. In 1998, this programme was generalized to cover the entire auto part trade under the new title – ASEAN Investment Complementary Operation (AICO) programme.
11. The ERP measures the proportionate increase in per unit value added of a given industry/sector due to the complete system of tariffs. More specifically, it takes into account the protection on output and the cost-raising effects of protection on inputs.
12. Jongwanich, J., Kohpaiboon, A., *Determinants of Protection in Thai Manufacturing*, Economic Papers, 29(3), pp. 276-294, 2007.
13. Kohpaiboon, A., *Multinational enterprises and industrial transformation: evidence from Thailand*, p. 195, Edward Elgar, Cheltenham, 2006.
14. Second-tier and third-tier suppliers produce parts and components for first-tier suppliers.
15. Athukorala, Prema-chandra, 'Trade Policy in Malaysia: liberalization process, structure of protection, and reform agenda', *ASEAN Economic Bulletin*, 22(1), pp. 19-34, 2005.
16. Kohpaiboon, A., *Multinational Enterprises and Industrial Transformation: evidence from Thailand*, p. 174, Cheltenham, Edward Elgar, 2006.
17. *Ibid.*
18. Data for Chrysler are not available. They are presumably included in the figures for Mitsubishi, Chrysler's global partner.
19. Klier, T., J. Rubenstein, *Who really made your car? Restructuring and Geographic Change in the Auto Industry*, W.E. Upjohn Institute for Employment Research, Michigan, 2008.
20. Humphrey, J., A., Oeter, 'Motor Industry Policies in Emerging Markets: globalisation and the promotion of domestic industry.' Humphrey, J., Lecler, Y., Salerno, M.S., (eds.), *Global Strategies and Local Realities: the auto industry in emerging markets*, St. Martin's Press, New York, 2000.
21. Doner, Richard F., Greg G., Noble, Ravenhill, John, 'Production networks in East Asia's Automotive Part Industry', Shahid, I., Yusuf, M., Altaf, A., Nabeshima, K., (eds.), *Global Production Networks and Technological Change in East Asia*, Oxford University Press, New York, 2004.
22. 'Global sourcing for auto parts with high function in automobile industry,' *Tyusyokouko Report*, No. 2007-4, Japan Finance Corporation, Tokyo, 2007.
23. *Bangkok Post Economic Review*, p. 5, 1999.
24. Thailand became a constitutional monarchy in 1932. Modern political institutions remain weak and unstable. Political parties are impermanent and subject to constant fragmentation. Few parties operate nationwide and have grassroots bases. They are not based on consistent political philosophy or policy agenda. As a result, the Thai bureaucracy plays an important role in policymaking. Industrial policymaking is spread across a wide array of agencies. In the absence of direct political influence and associated lobby group pressure, industry-specific policymaking is normally undertaken by middle and senior officials in consultation with firms and trade associations under ad hoc multiple office committees.
25. In 1983, the import duty drawback scheme, in operation since 1975, was supplemented with a complete direct duty exception for export-oriented firms with export-sale ratios of more than 30%. Customs procedures for these imports have been greatly simplified from 1997. In 1994, parts and components supplied by domestic firms to production of automobiles for export markets were exempted from all domestic taxes.
26. Data are given only for the latest year for which the survey results are available. There has not been significant change in the ranking of individual Asian countries since the commencement of survey in 2004.
27. Doner, Richard F., *The politics of uneven development: Thailand's economic growth in comparative perspective*, Cambridge, Cambridge University Press, 2009.



CHAPTER IV

GROWING WITH GLOBAL PRODUCTION SHARING IN MALAYSIA

THE PENANG EXPORT HUB

CASE STUDY EXECUTIVE SUMMARY	62
THE RISE OF GLOBAL PRODUCTION	62
PENANG'S ORIGINS AS AN EXPORT HUB	63
POLICY REFORMS REVITALIZE THE ECONOMY	63
EVOLUTION OF THE EXPORT HUB	68
PENANG WEATHERS GLOBAL CHANGES.....	72
INVESTMENT TRENDS AND COMPANY PROFILES.....	74
EXPORT PERFORMANCE.....	78
A VIBRANT INDUSTRIAL CENTRE WITH ECONOMY-WIDE IMPACT	80
CONCLUSION	85
ANNEX: SOURCES AND METHODOLOGY	87

GROWING WITH GLOBAL PRODUCTION SHARING IN MALAYSIA

THE PENANG EXPORT HUB

CASE STUDY EXECUTIVE SUMMARY

Global production sharing – the division of production processes into geographically separated stages – has been an increasingly important facet of economic globalization over the past few decades.¹ This study seeks to broaden understanding of global production sharing and explore policy options for developing countries to engage effectively in production networks as part of a national development policy.

The export production hub in the State of Penang, Malaysia, with more than four decades as a major hub in global production networks, provides a valuable laboratory to study government policies and global sourcing strategies of MNEs in determining developmental gains from global production sharing.

This study focuses on the role of public-private partnerships in forging links between MNEs and local firms to achieve self-sustained growth through enhanced local capabilities. It probes the role of public-private partnerships in Penang in the context of rapid changes in global production networks and increased competition faced by existing production locations as production networks expand to new locations with greater relative cost advantages.

The policy lessons from the Penang experience are relevant for other developing countries. Countries that seek to use technology to move up the value chain and increase national income will also find insights from this case study.

The study first provides an overview of initial economic conditions in Penang to set the stage for the ensuing analysis. Next it discusses the policy context, key elements of policy reforms and the institutional setting in which export-oriented development strategy was implemented. The Penang state government made innovative efforts to gain policy space and financial autonomy within the Malaysian federal system. Next, evolution of the export hub is discussed. Investment

patterns and export performance are then examined, followed by a discussion on the economy-wide implications of export-led growth. Key findings and policy lessons are presented in the conclusion.

THE RISE OF GLOBAL PRODUCTION

With a modest start in the electronics and clothing industries, multinational production networks have evolved and spread into many industries such as sports footwear, automobiles, televisions and radio receivers, sewing machines, office equipment, power and machine tools, cameras and watches, and printing and publishing. At the formative stage, production sharing involved assembly of small fragments of the production process in a low-cost country and re-importing the assembled parts and components to be incorporated in the final product.

Subsequently, production networks began to encompass many countries engaged in the assembly process at different stages, resulting in multiple border crossings by product fragments before they were incorporated in the final product. As international networks of parts and component supply have become firmly established, producers in advanced countries have begun to move the final assembly of an increasing range of consumer durables to overseas locations to be closer to their final users and in some instances to take advantage of cheap labour. These consumer goods include computers, cameras, televisions and automobiles. There has been a steady rise in trade in parts and components and assembled final products – ‘network trade’ – in global production networks. In 2007, network trade accounted for 51% of total world manufacturing exports, with 41% of these exports originating in developing countries.²

Global production sharing in consumer goods such as garments and footwear normally takes place through arm’s length relationships, with international buyers playing a key role in linking producers and sellers in developed

countries. However, the bulk of global production sharing in electronics and other high-tech industries still takes place under the aegis of MNEs. This is because the production of final goods requires highly customized and specialized parts and components whose quality cannot be verified or assured by a third party. In addition, it is not possible to write a contract between the final producer and input supplier that would adequately specify product quality.

This is particularly the case when establishing production units in countries that are newcomers to export-oriented industrialization. As the production unit becomes well-established in the country and it forges business links with private and public-sector agents, arm's length subcontracting arrangements with local firms can develop, leading to firm-level upgrading of technology and management capabilities.

Global production sharing creates opportunities for developing countries to participate in a finer international division of labour and specialize in production processes in vertically integrated global industries depending on relative cost advantage. Because parts and components, capital and production technology are mobile within global production networks, relative unit labour cost determines a country's success from engaging in global production sharing. However, in addition to labour abundance, several factors impacting the business climate are important in attracting MNEs to set up assembly plants and deepening their engagement with local enterprises.

PENANG'S ORIGINS AS AN EXPORT HUB

Penang, a state located on the northwest coast of Malaysian Peninsula, is divided into two parts: Penang Island (Pulau Pinang, in Malay), an island located in the Strait of Malacca; and Seberang Perai (formerly Province Wellesley). Penang is the second smallest among the 13 states in area, but the eighth most populous at 1.52 million, according to the 2010 census. In terms of natural resources relative to its population, Penang is the least favourably endowed of all the states of Malaysia.

Penang's modern history began with the arrival in August 1786 of Captain Francis Light to set up an East Indian Company trading post. Under British rule, Penang became the first port of discharge for ships sailing from Europe and India to the Strait of Malacca, and a trade centre for the northern Malay Peninsula, Sumatra, Burma, South Thailand and the Dutch East Indies (Indonesia) after the opening of the Suez Canal in 1869. British protection drew merchants and migrants from neighbouring countries, with Chinese immigrants soon becoming the largest community. From the early 20th century, Penang was a regional centre of Islamic, Chinese and English education.³

At independence in 1957, Penang's economic status was healthier than other Malay states and comparable to Singapore and Hong Kong SAR. Trade-related infrastructure, including its airport, container port and sea-cargo terminal, was the best in Malaysia. There were well-developed banking, insurance and freight forwarding services, water supply, electric power, telecommunication services and transport facilities. Penang had a relatively well-developed network of small enterprises evolved around warehouse activities. People in Penang were relatively well educated; most of them had at least nine years of schooling, with a substantial number proficient in English.⁴

When Malaysia attained independence in 1957, attention focused on the new national capital, Kuala Lumpur, which became the country's main port. Penang's trade from Thailand, Burma and Indonesia dwindled as each country developed its own ports. Indonesia's confrontation with Malaysia from 1963-1965 cut off lucrative trade. The final blow came with the revocation of its free port status in 1967. Consequently throughout the 1950s and 1960s, Penang's trade-dependent economy slid while the population grew rapidly due to the post-war baby boom.

In the early 1960s, the Alliance Party state government attempted to avert the collapse of Penang's economy through a programme of import substitution industrialization. An industrial state was set up in Perai in 1964 to produce goods for the domestic market, but most of these industries failed within a few years. By the end of 1960s, Penang's per capita income was 12% lower than the national average. The unemployment rate reached 9% – 16% when underemployment is considered – and the population's general mood was rebellious. Penang was plagued by frequent strikes, social unrest and racial tension.⁵

In this volatile climate, revitalizing the economy was the dominant issue of the May 1969 general elections. The newly formed Gerakan Rakyat Malaysia (Malaysian People's Movement Party), led by Dr. Lim Chong Eu, won by promising to revitalize the economy through export-oriented industrialization. This new political leadership ushered in an era of policy reforms that set the stage for the emergence of Penang as an export hub.

POLICY REFORMS REVITALIZE THE ECONOMY

In 1969, the central government retained Robert R. Nathan Associates, a US-based consultancy firm, to prepare a master plan for Penang's economy. Analyzing Penang's development potential in light of the experiences of Japan, Chinese Taipei, Hong Kong SAR and the Republic of Korea, the Nathan Report – Penang Master Plan Study – called for a shift in economic structure through export-led growth strategy. After taking into account Penang's limited agricultural potential and lack of mineral resources, the plan called for 'plugging in' the economy into the global

economy. The plan was based on using human resources as the only viable strategy to avoid economic stagnation, chronic unemployment and outmigration of capable young people.

The Nathan Report proposed a shift of emphasis from Seberang Perai (the capital of Province Wellesley) to Bayan Lepas, for its better transport facilities, good logistics and access to a large labour pool. The report envisioned an international division of labour: the electronics industries in the West were looking for cheap labour doing repetitive work. The report also saw potential for tourism and fishing, but emphasized export-led industrialization as the potential prime mover.

Dr. Lim embraced the Nathan Report as the blueprint for policy reforms turning 'the socially disturbing high unemployment rate in Penang ... into a socio-economic advantage through the promotion of labour-intensive industries'.⁶ He selected the electronics industry as the priority, and free trade zones (FTZs) as the vehicle to attracting electronics multinationals to set up production facilities. The choice of electronics as the target industry was based on two considerations. First, its labour-intensive nature and second, unlike heavier polluting industries, it was compatible with Penang's role as a centre of tourism.

Penang state government's decision to embark on export-led industrialization was followed by a major policy shift at the federal level. In May 1969, Malaysia experienced its first major ethnic conflict. Following this traumatic event the Malaysian Government formulated a sweeping national development programme based on affirmative action, the New Economic Policy (NEP).⁷ The overriding objective of NEP launched in 1971 was to maintain national unity through poverty eradication among the entire population and restructuring Malaysian society 'so that the identification of race with economic function and geographical location is reduced and eventually eliminated'.⁸

Development strategy was reformulated with an emphasis on export-oriented industrialization. Long-term targets were established for Malay equity ownership in limited companies and the proportion of Malays employed in manufacturing and occupying managerial positions.

NATIONAL – LOCAL COORDINATION

The choice of export-oriented growth as a key element of the new development strategy at the national level greatly facilitated the Penang government's export-led industrialization move by avoiding possible policy conflict. However, the NEP's ethnicity-centred development policy posed a major challenge for the Chinese-dominated Penang government.

Malaysia has a centralized form of federal administration,⁹ though state governments have limited revenue-raising capabilities. The federal government monopolized taxation;

state governments can only raise revenues through land acquisition and management and setting utility rates. The states have little influence on offering tax incentives and other concessions to foreign investors. The states, apart from allocating land, providing infrastructure, and some freedom in respect of collecting local taxes, have to work within the general national guidelines while devising their own projects and programmes. Moreover, there are no clear-cut rules or procedures for budgetary allocation among the states. Conflicts surface, especially when an opposition party controls a state government.¹⁰

Dr. Lim obtained freedom of action for his Penang development strategy through a collaborative approach. He maintained close links with Tun Abdul Razak, then deputy Prime Minister and Director of the National Operations Council (NOC),¹¹ who later became the Prime Minister. Dr. Lim committed full support to Razak in restoring peace and order in Penang during the turbulent period following the ethnic riots in Kuala Lumpur. This cooperation led to the joining of the Gerakan party with the federal ruling party, Alliance, to form a coalition called Barison Nasional. This well-calculated move helped to avert conflict with the federal government in implementation of policy reforms in Penang.

The reforms began with restructuring government machinery. A new statutory body, the Penang Development Corporation (PDC), was formed as the principal development agency. The legal status of PDC as a statutory body allowed it flexibility in fulfilling national objectives in areas where government departments faced constraints, and provided an institutional mechanism for coordinating activities of the municipal administration and the state government. Dr. Lim filled the key positions of PDC with senior personnel of the federal administration who had been involved in the Penang master plan study. Of particular importance was the appointment of Chet Singh, an ethnic Indian economist from the Malaysian Civil Service and the State Financial Officer, as the first general manager of PDC. Singh played a pivotal role as Lim's right-hand man during the ensuing two decades in transforming Penang into an export-production hub with MNE participation.

Dr. Lim chaired the State Planning and Development Committee (SPDC), the apex policymaking body of PDC, during his more than 20-year tenure as the Chief Minister (May 1968 – October 1990). The SPDC made all decisions relating to permission for land acquisition and development. All proposals were reviewed within three months of receipt, correspondence was replied to within seven working days, and responses to complaints were given within 21 working days. The PDC operated with the work ethic and management style of a private-sector company, with reward for employees based on productivity.¹²

In 1974, the two local authorities on Penang Island were abolished and the island was placed under a single municipal administration, the Board of Management of Penang Island. On the mainland, the three district councils were merged to form a single local authority, the Board of Management

of Seberang Perai. In 1976, the two local authorities were changed to Penang Island Municipal Council and Seberang Perai Municipal Council. PDC assumed the role of coordinating activities of state government and the city council, addressing the various flows and gaps within the two levels of governance. Municipal administration reforms facilitated PDC's task of coordinating the works of the various agencies involved in approvals for new businesses.

PDC started operations with an initial grant of Malaysian ringgit (RM) 5 million (US\$ 1.6 million) from the state government. Given Malaysia's high degree of fiscal management centralization, PDC programmes had to be implemented under severe resource constraints. In the formative years, PDC was granted autonomy to evolve a budgetary system to finance its programmes and activities from internally generated funds supplemented by loans from private institutions. An innovative feature of the PDC budgetary system was a land bank formed through acquisitions and strategic purchases, which acted as a main source of revenue and facilitated infrastructure development.

Financial autonomy gained through this strategic move was vital for PDC's success because other Malaysian states soon followed Penang's example of creating their own development corporations, creating intense competition for federal funding.¹³ With a large number of development corporations and other government-linked companies emerging, the federal government in 1974 established a Ministry of Public Enterprises to coordinate, monitor and evaluate the economic development corporations (EDCs) in the 13 states and other government-linked companies.¹⁴ In 1980, the Federal (State Legislation) Competency Act was amended to give the Ministry of Public Enterprises and the Ministry of Finance more control over the operation of statutory bodies.

An important feature of the PDC planning process under Lim Chong Eu's leadership was brainstorming sessions where officers from various departments and statutory institutions and the Chief Minister met in an informal environment. These 'jam-sessions' proved to be a very effective means of exchanging ideas and views.¹⁵

The PDC tactfully handled the NEP employment quotas by permitting firms to recruit workers of their own choice based on response to job advertisements – that is, by requiring firms to recruit solely on the basis of advertisements rather than trying to fill the quotas. The PDC enjoyed considerable autonomy because Dr. Lim effectively used his political connections to cushion PDC management against influences from the federal level.

FREE TRADE ZONES, INDUSTRIAL STATES AND INFRASTRUCTURE DEVELOPMENT

Based on the Nathan Report recommendations, the Penang state government pioneered the establishment of

FTZs in Malaysia. Through close consultation with relevant federal agencies, in particular, the Economic Planning Unit operating under the National Consultative Council, Penang persuaded the federal government to promulgate the Free Trade Zone Act in 1971. The Royal Customs and Excise Department opposed FTZs on the grounds that they would provide Penang with a back door to regaining its free port status. However, the state government was able to jump this hurdle thanks to the intervention by then Prime Minister Tun Razak.¹⁶

The Bayan Lepas FTZ opened in August 1972. It aimed to attract clean industries that required the movement of materials and products by air transport such as electronics, medical and other precision and machining industries.¹⁷ A second FTZ opened eight years later in Seberang Perai near the shipping port to serve firms producing bulk items – high weight-to-value products such as household electrical appliances that depend on the shipping port and railways for the movement of material and products. Subsequently, the original Bayan Lepas FTZ was extended. Near the FTZs, five industrial estates were set up for supportive and ancillary industries related to FTZ firms, resource-based industries and import-substitution manufacturing.

PDC used FTZs and industrial estates for focused infrastructure development for successful global integration of the Penang economy. PDC also created housing and new townships to bring growth to the rural and least developed areas. Two new townships, adjacent to the two FTZs, helped redress social and economic imbalances between rural and urban populations. In the new townships, surpluses from medium-cost housing units were used to subsidize low-cost units. To link the two new townships, the Penang Bridge was opened in 1985 with the support of the federal government. PDC subsequently embarked on a major urban development programme to meet the growing demand for civic, administrative and community amenities in the George Town city centre.

Land is a scarce resource in Penang. In its development planning, PDC created a land bank through market acquisition of paddy fields and reclamation. The land bank applied the rule that for every acre of industrial land, there should be four acres for development of housing, recreation, civic and social amenities and other related economic activities. Given land scarcity in Penang, the importance of land reclamation from the sea was recognized as far back as early 1970s as the most economical way of obtaining land for development. The possible total area of reclamation from the sea was estimated at the time to be about 3,800 hectares.¹⁸

INVESTMENT PROMOTION

From its inception, PDC undertook promotion missions to various countries. The investment promotion campaign was designed with the help of Andy Ross, who had worked closely with Singapore electronics firms. Most of these missions, in particular those to California's Silicon Valley, Germany and Japan, were led by the Chief Minister. In its investment

Box 6: The FTZ incentive package

The Free Trade Zone Act of 1971 defines the zones to be outside of the Federation of Malaya for the purpose of custom duties and charges. All imported raw materials, components and capital equipment directly related to production may enter the zones without payment of customs duties or other taxes. Goods manufactured in and exported from a FTZ are exempt from sales tax and excise tax. Goods may be moved from one FTZ to another without payment of duty or other taxes.

Because goods purchased by FTZ firms from within Malaysia are treated as exports from Malaysia, the manufacturers of such goods are eligible to claim drawback of duties on the imported raw materials and components used in their production. The domestic seller is responsible for payment of applicable export duties and obtaining necessary export licenses. These goods are not subject to excise taxes. FTZ firms are also exempt from the payment of sales tax, excise duty and service tax.

Sales on the domestic Malaysian market of FTZ firms' products require prior government approval. Such sales are handled on a case-by-case basis and limited to 20% of a firm's annual

gross output. These sales are treated as imports into Malaysia and import duties, and other taxes normally applicable to imports of these goods, must be paid.

Real estate in FTZs is leased to zone firms at below market lease rates. This was the most significant subsidy in providing infrastructure to FTZ firms. At the initial stage of operation of Bayan Lepas FTZ some firms operated in factory buildings built and owned by the PDC. These buildings were rented at or below commercial rental rates.

There are three major mutually exclusive systems of tax relief for export-oriented firms in Malaysia: pioneer status, labour utilization relief, and investment tax credit. The first two entail complete exemption of company income tax for the specific period and the third involves an exception that may be complete or only partial. In addition, export-oriented firms are also eligible to deduct export promotion expenditure in calculating the taxable income. These tax incentives are not unique to the FTZ firms, but they are an important component of the FTZ incentive package.

promotion campaigns, PDC successfully delivered the message that Penang people's skills and adaptability could effectively complement the needs of high-tech industries.¹⁹

When investors arrived in Penang, PDC provided an efficient and speedy one-stop service of approving and facilitating investment. In addition, PDC understood the importance of addressing the needs of investors already located in Penang: 'The after sales service was just as, if not more, important than the initial promotional work.'²⁰ A delegation led by the PDC Chairman often called upon chief executives of companies that had invested in Penang to maintain close relationships and obtain inputs to develop and update the investment promotion campaign.

PDC avoided organizing large investment seminars or conferences. Rather it conducted meetings with individual companies so that full attention could be paid to their specific needs. Over the years, PDC's approach to investment promotion was shaped by interactions and close relations with the MNE affiliates in Penang.

FORGING MNE-SME LINKS

Forging links between branch plants of MNEs in Penang and local investors has been a key PDC priority.²¹ Based on his close ties to the local business community, the Chief Minister encouraged MNE affiliates to procure components locally and foster subcontracting relationships with local firms. Promoting links between SMEs and MNE affiliates operating in Penang has been a priority of the Penang Skills Development Centre (PSDC), an innovative business-university-government training centre (see box 7). PDC

also encourages and provides institutional support to MNE affiliates to initiate vendor development programmes to strengthen backward input linkages with local suppliers.

At the formative stage, local firms faced two constraints in venturing into subcontracting with MNEs. First, they had to pay duties on imported inputs, whereas foreign firms located in FTZs were exempted from those duties. Second, being new to the industry, they were at a disadvantage compared to foreign investors. In 1986, the incentive package offered to foreign firms (including licensed manufacturing warehouse status) was also offered to local firms. In addition, at the request of the state government, the Malaysian Industrial Development Authority (MIDA, the federal investment approval body) imposed a minimum capital requirement of RM 2.5 million for foreign machine tool firms seeking approval to set up operations in Malaysia, in order to support smaller local machine tool firms.²²

VOCATIONAL TRAINING PROGRAMMES

In 1970, PDC established an Industrial Training Institute with West German assistance to offer occupational training in areas such as auto mechanics and welding. PDC, in collaboration with the City Council of Georgetown, launched a 'job-cum-training scheme' under which unemployed school leavers were employed as half-time workers, with the rest of the work day dedicated to technical training in basic electronics and electrical component assembly. These trainees were the first recruits of the new electronics factories in the early 1970s. Under this training programme, MNEs could install their equipment at the centre and train their workers there. This helped reduce start-up time for new

Box 7: The Penang Skill Development Centre – excellence in training to supply multinationals

The Penang Skill Development Centre (PSDC), established in 1989, has attracted worldwide attention as an example of successful public-private partnership in human capital development. PSDC officials have travelled to many developing countries to provide expertise on how to establish similar organizations.

In 1987, at an American Business Council Seminar, D.J. Hill, President of the Free Trade Zone Enterprise Association in Penang and CEO of National Semiconductor Electronics, observed that the progress of the electronics industry in Malaysia was constrained by a shortage of adequately trained technicians and asked the Penang state government to address the issue. Chet Singh, General Manager of PDC, promised to look into the matter. One month later he met with the CEOs of the three largest MNE affiliates in Penang – Motorola, Intel and Hewlett-Packard (HP) – to promote the idea of pooling training resources in a common training facility. The proposal was for a tripartite training institution, the Penang Skill Development Centre, bringing together industry, academia (Universiti Sains Malaysia) and government.

Following this meeting, a steering committee was formed with representatives from the Penang state government, Motorola, HP and Intel, under the chairmanship of Stephen Cooper, CEO of HP, to identify the organization's objectives and strategies. The MNE managers were generally sympathetic to the idea, but expressed two main concerns. First, there was fear about employee poaching by competing firms and security issues emanating from outsiders (including government officials) having access to the facility. Second, according to a report by the PDC,* MNEs were concerned that 'collaborative efforts between companies and governments have long history of lofty visions and flashy openings, but only to wither away after a few years'.

It was decided to form a neutral training facility run as a collaborative industry effort, with the state government acting only as a facilitator. PDC agreed to be an *ex officio* member of the management council to avoid diluting industry leadership. The MNEs agreed to provide trainers, money and material for a year with further support depending on a performance assessment. The state government agreed to provide an annual grant of RM 60,000 to cover the initial expenses and lease premises to the centre for one ringgit a year. After a successful operation in the first year, the MNEs decided to contribute resources on a continual basis. PDC negotiated with the federal government to provide taxation relief for the firms' contribution to PSDC training programmes. By 1999, the PSDC was financially independent and stopped receiving the state government grant.

PSDC is a non-profit organization of firms in Penang's FTZs and industrial estates. It has three membership categories: founder members, full members and ordinary members. Founder members paid a premium and were eligible to be nominated to the management council. The founder membership list was closed in 1990 with 31 members. Since 1993, full members, like founder members, are eligible to vote and be nominated to the management council. As the highest authority of the centre, the management council sets the priorities and strategic directions. It approves memberships, appoints members to the management council and appoints the executive director and other senior managers.

PSDC started in 1989 with 32 courses for 559 participants; by 2010 it had offered more than 400 courses to 7,500 participants and trained over 90,000 workers. At the formative stage, foreign firms featured prominently in its training activities. Local firms' engagement has expanded over the years.

The curriculum was developed through a needs analysis carried out by the human resources managers of member companies. PSDC management council members closely studied MNE-government joint training initiative in Singapore before designing the initial training programme. At the beginning, PSDC's prime focus was on creating a large pool of technicians to meet the immediate needs of rapidly expanding electronics firms, particularly just-in-time measurement and precision engineering skills. Over the years, the scope and breadth of the organization have expanded, influenced by technological progress and the changing operational environment.

In 1996, a USAID-funded study listed PSDC as one of the 10 best workforce development institutions in the world. Over the years, 11 out of the 13 states in Malaysia have embraced the PSDC concept of tripartite collaboration to set up skills centres.

In 2000, PSDC launched a Global Supplier Development Programme (GSDP), a vendor development programme**. It aims to assist local companies become world-class global suppliers by developing their capabilities through training and forging linkages with MNEs. The training is divided into two streams: manufacturing and services. Courses are offered in three areas: core competencies, intermediate systems and advanced systems. Core competencies cover basic business and organizational skills SMEs need to work with large companies. The intermediate system courses introduce trainees to the latest technologies used by potential partners. Once an SME has completed basic training, it is selected to enter an MNE coaching and mentoring programme. This linkage transfers additional

* Penang Development Corporation, Penang, Malaysia: *Strategy & Success*, PDC, 2003, Bayan Lepas, Penang.

** Ruffing, L., *Deepening Development Through Business Linkages*, United Nations Conference on Trade and Development, Geneva, 2006.

skills and technology and monitors progress. After an agreed period of coaching and mentoring, the MNE decides whether to accept the SME as part of its supply chain.

In 2010, PSDC set up a Shared Service Centre (SSC), funded by the federal government, that houses the nation's largest electromagnetic compatibility laboratory, an electromagnetic compliance test lab to serve as a platform for developing local product design capabilities. PSDC expects that having local access to state-of-the-art test equipment will not only make the process of local design fabrication more economical and flexible, but also reduce the product-to-market time resulting from the need to send

designs abroad for testing. Currently, Malaysian firms rely mostly on Singapore and United States laboratories for electronics manufacturing services testing.

SSC is planning to develop and conduct fast-track training programme to accelerate the augmentation of engineering talent. Motorola Corporation has offered to share its Quality Management Systems, train lab staff and assist the lab to gain accreditation. For the use of testing facilities, a two-tier pricing structure will be implemented to ensure that SMEs are not disadvantaged: the lab will provide baseline capacity to SMEs at a concessionary rate and additional capacity to MNEs.

factories. PDC also liaised with the Industrial Research and Consultancy Service Centre of the Universiti Sains Malaysia (Malaysian University of Science) to provide technical courses for SMEs.

By the late 1980s, when skill shortages began to hamper expansion of the electronics industry, PDC joined with MNEs to establish the PSDC. PSDC, which inaugurated its first training programme in July 1989, has since played a pivotal role in meeting human capital requirements of electronics firms. In 1998, PDC launched a Young Entrepreneur Programme to cultivate an entrepreneurial culture among high school dropouts.

LESSONS FROM FAILED PROJECTS

In the early 1970s, PDC directly invested in several fields: electronics and electrical goods, agro-based industries, construction, mushroom cultivation, precision engineering and shipbuilding. These projects failed commercially within a few years. As the Nathan Report correctly predicted, given its remote location within the Malaysian Federation and the small domestic market, Penang was not a viable location for import substitution activities. Once the new projects proved to be commercial failures the state government swiftly abandoned them, without trying to make them survive through direct subsidies.²³

This was in sharp contrast to the import substitution attempts in many other developing countries and in the rest of Malaysia, where perpetuating inefficient industries became a drain on government budgets and domestic resources. Other than the short-lived, state-led industrialization attempt, the prime focus of economic policy in Penang remained to create an enabling environment for private sector led growth.

As already noted, in its investment promotion campaign the Government did focus on electronics and electrical goods industries for legitimate considerations of employment potential and environmental impact, but there was no attempt to target specific product lines or potential investors within these industries. At the initial stage of investment promotion Penang state government focused on electronics and

electrical goods industries for legitimate considerations of employment potential and environmental impact, but there was no attempt to target particular investors (firms) within these industries. The policy emphasis was on supporting 'all potential winners'²⁴ by creating an enabling environment for the operation of foreign and local private enterprises.

EVOLUTION OF THE EXPORT HUB

The first MNE to set up an assembly plant in Penang was National Semiconductor (NS) from the United States. Chet Singh, PDC's founding General Manager,²⁵ recalls his first encounter with NS as follows:

"The NS people arrived at PDC on a Friday evening in 1971. They had a lot of questions to ask which, in honesty, we were not able to answer immediately. I took a bold chance and asked them to let us have a copy of the questionnaire and promised that the information sought would be made available on Monday.

I suggested that they enjoy a break at the beach as they had been travelling for over two weeks. We worked hard during the weekend and managed to hand over the very technical questionnaire back to them on Monday, all filled up. They were impressed.

We then showed them land and other facilities we had. And they made a swift decision to come in. Filling the NS questionnaire was an invaluable experience for us. We realized that other potential investors too would also require relevant information. So we prepared an investment guide for investors based on the NS questionnaire and our answers."

The arrival of National Semiconductor was an auspicious start for the Bayan Lepas FTZ. Charlie Sporck, the CEO of

Box 8: Intel's vendor development programme

Having a well-developed local vendor base for the supply of jigs, fixtures and tooling services is vital for the expansion of assembly activities in the electronics and electrical industry. Local Penang tooling vendors in the early 1980s operated out of small sheds or backyard workshops and had very basic equipment suited for low precision fabrication work. There were too many vendors and cutthroat competition among them often resulted in poor product quality. This turned out to be a major hurdle to developing local supporting industries.

Intel Penang recognized the need to ensure that local tooling vendors improve their capacity to meet the factory's growing needs. This led Intel to initiate an innovative vendor development programme in 1984*. The programme worked closely with a few vendors with potential for growth and involved five steps:

- Identify suppliers, mostly from its former employees, willing and able to meet its requirements;
- Match Intel's business needs with the capabilities of the potential suppliers and provide them with initial training, using its internal training facilities, the PSDC and the National Institute of Occupational Safety and Health for contractor safety certification training;
- Gradually allocate tasks or contracts;
- Continually refine the vendor's capabilities and promote continuous improvement through coaching, supplier

briefings, contractor dialogues and business technical reviews;

- When the vendor gains maturity, help it to become a global supplier. The purpose at this stage is to assist the vendor develop a diversified customer base, without totally relying on Intel for its expansion. The mature vendor is called upon to supply solutions for Intel's technical problems, thus becoming a 'total solution supplier'. Intel also shares its 'technical roadmap' with the vendor so that it can prepare for change.

To begin implementing this programme Intel reduced its vendor base to three local tooling vendors with better potential for future growth. These vendors were given a dependable volume of business at premium prices to enable them to focus on product quality. The expectation was that the profits would be reinvested to upgrade the vendors' capacities and technological capabilities.

The Intel Penang Vendor Partnership programme was the first of its kind in Penang. Capabilities of participating local vendors progressed from simple fabrication of jigs and fixtures to the design of semi-automated equipment and eventually to turnkey projects requiring higher levels of hardware and software expertise. This partnership aided Intel's operations. With better vendor support, quality levels improved and faster turnaround of machinery and parts was achieved. Participating vendors such as LKT and Eng have since become MNEs (see boxes 9 and 10).

* Lim, P., *Steel: From Ashes Rebuilt to Manufacturing Excellence*, Kuala Lumpur, Pelanduk Publication (for Intel Technology Sdn Bhd), 1991.

National Semiconductor, had started his career at Fairchild Semiconductor, which is considered the United States electronics industry's equivalent of 'a sycamore tree with its wing seeds.'²⁶ Two other semiconductor companies, Advanced Micro Devices (AMD) and Intel, founded by other 'Fairchild children', soon followed National Semiconductor to Penang. Coming to Penang was the first step of the global spread of both these companies. The Intel plant later became the largest single employer in Malaysia.²⁷ National Semiconductor set up its first overseas operations in Singapore in 1968 and came to Penang in search of an additional low-cost location because of rising labour and rental cost in Singapore.

Between 1972-1975, five other MNEs set up assembly plants in Bayan Lepas FTZ: Osrum (a German automotive lighting manufacturer), Hewlett-Packard (a United States electronics producer), Bosch (a German auto part producer), Hitachi (a Japanese semiconductor producer) and Clarion (a Japanese auto part producer). These eight MNEs, which drove the industrial transition in Penang, are known locally as the 'Eight Samurai'.

ANCILLARY INDUSTRIES EMERGE

Following the entry of Eight Samurai, a network of ancillary industries began to emerge to meet their requirements: stamped metal components, automation equipment, gigs and fixtures, machine tools, and molded rubber products. The MNE-SME partnerships became more prominent over time, resulting in the growth of a large pool of local tooling and equipment manufacturing firms. At the beginning, these supporting industries were dominated by SMEs from Japan, Singapore and Chinese Taipei. Subsequently, local firms began to emerge.

Former MNE employees created most of the local firms. For instance, former Intel employees established LKT Engineering, Globetronics, Shinca, Shintel and Unico, and former Motorola employees set up Loshita and BCM Electronics. Other local firms such as Eng Teknologi and LKT Engineering expanded their operations benefitting from vendor development programme launched by Intel, Motorola and other MNEs (see box 8).

Box 9: Eng Teknologi Holdings Berhad: from backyard workshop to multinational corporation

Teh Ah Ba, a physician with a passion for mechanical inventions, was one of first local entrepreneurs to foresee opportunities in the nascent electronics industry in Penang. In 1974, he set up a backyard workshop, Eng Hardware Electrical Company, behind his clinic with a start up capital of RM 500 (US\$ 217) to produce jigs and fixtures for a few semiconductor companies.

After rapid expansion during the next five years, Eng Hardware Electrical changed its name to Eng Hardware Engineering with its core business of producing precision tooling for the semiconductor industry. By 1984, there were five Eng Hardware Engineering workshops on Penang Island. The company started automation equipment assembly in 1983. A year later, Teh Ah Ba organized a pool of engineers to design, research and develop equipment automation and metal stamping.

In 1984, the company started direct exports of automation equipment to the Republic of Korea, Hong Kong SAR, United States and Singapore. Within two years after the first shipment left for Seoul, the company built up enough export potential to become eligible for free trade zone status. In 1987 it moved to a new factory at Bayan Lepas FTZ.

In 1988, the company began actuator production for the hard disk drive industry with a new investment of US\$ 2.2 million. The same year saw the birth of Eng Teknologi Holdings Berhad, the Eng group's investment holding company. In 1993, it made a strong debut on the Kuala Lumpur Stock Exchange.

In 1996 its first offshore manufacturing plant, Engtek International Limited, was set up in Dongguan, China,

followed by a fully integrated manufacturing facility in Laguna, the Philippines in 1997. Two production plants were set up in Thailand in 1998 and 2006. In 2003, it acquired Altum Precision in Singapore, a strategic move to encompass innovative engineering solutions.

Today, the group's Integrated Engineering Centre spans Malaysia, China, the Philippines, Thailand and Singapore, has floor space of 75,000 sq. metres, and employs over 5,000 skilled workers. Approximately 1,000 computer numerical control machines are strategically located in production facilities in these five countries, enabling the company to meet its global customers' specific requirements. The group's customers include Copeland, Danfoss, Eato, Emerson Climate Technologies, Fujitsu, Hitachi, IBM, JVC, Samsung, Seagate, TDK and Western Digital. In 2007, total group revenue surpassed RM 500 million (US\$ 145 million).

Within three decades of its humble beginnings, Eng Tek Group has attained global recognition as a regional powerhouse in the precision engineering, manufacturing and technology sector. It is a world-class global supplier of hard disk drive components. The group has won several international accolades and awards including Asiamoney's Best Small Managed Company in Malaysia (1999), HSBC Asia's Leading Corporate Award (2000), Intel Supplier Recognition Award (2000), Fujitsu Distinguished Partner Award (2001), Forbes Global World's Best Small Companies (2001), Maxtor Outstanding Supplier Award (2001, 2003 and 2004), Best Local Vendor Award (2002), Emerson Thailand Supplier Award (2007) and White-Rodgers Best Supplier Award (2010).

By the mid-1980s, an export cluster with a sizable number of branch plants of major electronics and electrical MNEs and a network of supporting industries was well established in Penang. Penang had become the world's largest exporter and the third largest assembler after the United States and Japan. The international media dubbed Penang Asia's 'Silicon Island'.²⁸ However, during the first decade of industrial transition, electronics firms in Penang were almost exclusively engaged in simple downstream assembly processes in the semiconductor manufacturing chain. Only a few companies such as Intel and AMD had started testing facilities. Four-fifths of the workforce in the 1970s and 1980s was engaged in jobs requiring little or no skills.²⁹

In the mid-1980s, intense competition from Japanese firms resulted in increasing automation in electronics assembly. A number of MNEs and local firms sought to attain critical aspects of the Toyota process of flow dynamics of multi-product single line production with its emphasis on zero defects and low inventory levels. Intel and other MNEs recognized the need for increased automation to improve productivity and quality. In-house automation groups were

formed and potential local tooling and other component suppliers were identified as strategic partners. By the late 1990s most electronics factories had fully automated and integrated assembly and testing facilities.³⁰

Ancillary industries that evolved around the major electronics and auto firms expanded rapidly, adding to network cohesion during this period. Plastics, machine tools and chemicals were added to the product mix in the early 1990s. Some Penang firms became suppliers to other high-tech firms, operating both locally and overseas, in addition to supplying their MNE partners (Lai 1995). Linkages of MNE affiliates with local ancillary factories strengthened over time due to the improved quality and reliability of local suppliers and services, rising transportation costs, and exchange rate volatility. Starting as small backyard workshops, some of these firms achieved the status of original equipment manufacturers, with substantial research and development (R&D) and design capabilities. Over the years, as the input-procurement practices become well established MNE affiliates have transferred expertise in fabrication, hardware and equipment controlling software to local tooling SME

Box 10: LKT Industrial Berhad: from humble foundry to contract manufacturing

Loh Kim Teow, a traditional metal worker, created a family-run foundry in 1948 to manufacture metal products such as household fencing, window grills and metal doors as well as a maintenance and part replacement service for ships arriving at the Butterworth free port. In the 1960s, Loh Kim Teow Foundry (LKTF) diversified into making piling equipment, cement mixers and mobile cranes for the construction industry.

In the 1970s, LKTF diversified into manufacturing precision tools and components and fabricating machinery parts for the semiconductor industry. In 1978, it was incorporated under the name of LKT Precision Engineering (LKTPE) Sdn Berhad. In the 1980s, LKTPE further diversified into designing and manufacturing automation equipment, primarily for the semiconductor industry. In 1988, the automation section of LKTPE was transferred to LKT Automation Sdn Berhad. The company specializes in the design and manufacture of precision automation equipment with control software. In 1989, LKTPE ventured into precision mold making, plastic injection molding and manufacturing. These activities were then transferred to LKT Plastic Technology Sdn Berhad. Its core business is to manufacture precision engineering thermoplastic parts and components for audio, disk drive and automotive industries.

In 1994, after restructuring the three companies, LKT Industrial Berhad (LKT) was incorporated as the holding company. In June 1995, LKT was listed on the Kuala Lumpur Stock Exchange. LKT Wafer Technology, a company designing and manufacturing semiconductor wafer transfer systems, was set up in 2000. In the following year, Iconext Sdn Berhad was incorporated to develop software applications such as control and monitoring software for automated equipment quality management solutions and document management solutions. In 2007, a new 90,000 square foot plant was built to house the group's Contract Manufacturing Division. The

group's integrated manufacturing network provides custom tooling fabrication, machine structure fabrication, plastic injection molding, and computer numerical control machine and assembly solutions to customers across a variety of industries.

Today, LKT has a worldwide reputation for contract manufacturing for original equipment manufacturing for the semiconductor front and back-end industries, surface mount technology industries, disk drive manufacturing and other electronics industries. It provides solutions for equipment outsourcing, ranging from parts procurement to production installation for end users.

LKT has expanded its operations across the Malaysian mainland, Singapore and Thailand. In 1999, LKT set up its first overseas affiliate, LKT Engineering (Thailand) Limited, which manufactures dies, jigs, and cutting tools for disc drive, electronic, semi-conductor and other industries. In 2001, an Industrial Product Division was established in the Kulim Hi-Tech Park in the State of Kedah for designing and manufacturing advanced storage solutions including industrial drawer cabinets, workstations and system racks. In the same year sales offices were opened in Kuala Lumpur and Singapore. The groups' revenue surpassed RM 300 million (US\$ 85 million) in 2007. More than 5,000 workers are employed in its many production plants in Penang.

In 2000, LKT won the inaugural Technology Business Review award for commitment to continuous innovation. Its subsidiary, LKT Manufacturing Sdn Bhd, won the Enterprise 50 Award for 2006 organized by the Small and Medium Industries Development Corporation and Deloitte Malaysia to celebrate the achievements of home-grown companies well-positioned for the future. In 2010, Singapore Aerospace Manufacturing became the majority shareholder of LKT and renamed it SAM Engineering & Equipment Berhad.

partners. Some local firms such as KLT and Globatronics, after expanding their product lines, became contract manufacturers, (see boxes 9 and 10).

Contract manufacturers undertake both components production and assembly for MNEs involved in front-end activities in the production chain. They run large-scale, highly automated manufacturing production systems and are responsible for process innovation. Many MNEs in electronics and related industries rely increasingly on them to operate their global-scale production networks, while limiting their role to head office functions such as product designing and marketing. This process, facilitated by standardization of components and advances in modular technology, has become a major factor in the rapid, global spread of production sharing.³¹

FROM SEMICONDUCTORS TO CONSUMER ELECTRONICS AND COMPUTER PERIPHERALS

The next phase of expansion of the Penang export hub began in the late 1980s with the arrival of consumer electronics and computer peripherals. Until the late 1980s, there were no firms involved in consumer electronics assembly, except Motorola, which was producing two-way radios, mobile car phones and cordless telephones. From the beginning, Motorola's Penang plant was its design centre for these products. From the late 1990s a number of MNEs, including Sony, Sanyo, NEC and Dell established assembly plants for consumer products, such as car stereos, hi-fi equipment, calculators and telephones. Most consumer electronics

companies are Japanese-owned, while some have Taiwanese, Singaporean and Malaysian equity.

In the area of computer peripherals assembly, the most significant was the arrival of disk drive firms starting in 1988. Between 1988 and 1991, most major players in this industry, including Segate, Maxtor, Hitachi Metals, Control Data, Applied Magnetic and Conner Peripherals, set up assembly plants in Penang.³² With the emergence of disk drives, local industry started producing disk drive components, which require a high level of precision engineering technology. The industry also engaged in improving and rebuilding machines based on imported prototype machinery for both local and regional markets.

Major foreign-owned contract manufacturing companies in the hard disk drive industry came to Penang in the late 1980s and early 1990s. Several Singapore-based entities came between 1989-1990 to provide manufacturing services in printed circuit board assembly. Several US-based companies came in the early 1990s to provide circuit board contract-manufacturing services. The development of locally-owned contract manufacturing companies took place in the early 1990s. These firms expanded their services to provide total solution systems for their customers. In the early days, most contract manufacturers performed on a consignment basis. By the mid-1990s, most of these companies in Penang were implementing turnkey operations.

PENANG WEATHERS GLOBAL CHANGES

Over the past two decades, the Penang export hub has undergone considerable structural transformation driven by domestic cost pressure – mainly increasing wages and rents due to land scarcity – and ongoing changes in patterns of global production sharing. There has been a significant contraction in final assembly of consumer electronics and electrical goods. This has been the outcome of competitive pressure from China for final assembly, which is more labour intensive than component assembly, production and testing.

Companies like Sony, Dell and NEC have significantly scaled down their operations in Penang. At the same time, firms in the disk drive industry have shifted relatively more labour-intensive segments in the production process to other low-cost locations in the region, in particular Thailand and the Philippines. However, this structural shift has not resulted in a 'hollowing out' of the Penang export hub, as some observers have inferred simply by looking at those companies that are leaving or scaling down their operations.

MOVING INTO HIGH-VALUE TASKS

Electronics firms involved in component design, assembly and testing restructured their operations by moving into high-value tasks in the value chain, while shifting simple low-end assembly activities to other low-cost locations.

This process has been greatly aided by the deep-rooted nature of their production bases, backed by a pool of skilled workers developed over the past three decades. A number of large electronics MNEs have shifted regional and also global headquarter functions to Penang. Manufacturing is only part of their operations.

Their activities in Penang now encompass corporate and financial planning, R&D, product design and tooling, sales and marketing. Most MNEs that have shifted final assembly of consumer electronics and electrical goods perform the related trading and services activities from Penang. Some of them now use their Penang affiliates as an integral part of their global training and skill enhancement programmes.

Osrum, Motorola and Altera have regional R&D hubs in Penang. Intel, AMD, Agilent started as assembly operators but now engage in supplying global shared services within their global networks. Intel Malaysia is now responsible for the group's global shared services. AMD now has its global shared services and design centre in Penang. Intel has one of its three global R&D design centres in Penang. It designed and developed the Atom Chip, which is the core of the Netbook revolution.

Motorola's largest R&D facility is in Penang. This facility is responsible for development and manufacture of all Motorola two-way communication devices – accounting for more than 50% of market share.³³ Penang plays a pivotal role in Fairchild's global production networks by manufacturing new products and packages, acting as a technical service centre for global customers, providing leadership and management support for back-end manufacturing, and delivering administrative and engineering services. Agilent Penang accounts for more than 60% of the group's turnover.

Altera's largest design centre is in Penang. The company is currently designing the next generation FPGA chip. Engineers represent 94% of its current Penang workforce and account for 60% of its worldwide engineering talent. Western Digital recently announced that it would build a US\$ 1.2 billion R&D and manufacturing facility in Penang. In 2007, STEC, a leading global provider of solid-state technologies and solutions for OEMs, built a facility with complete design, manufacturing and logistics capabilities in the Bayan Lepas FTZ. It designs, develops and manufactures custom and open-standard memory solutions based on flash memory and DRAM technologies and external storage solutions.

DIVERSIFYING PRODUCT LINES

While the electronics industry is still the main engine of growth in Penang, in recent years the production base has begun to diversify into a number of electronics-related dynamic product lines. These include medical services and equipment, light-emitting diodes (LEDs) and photovoltaic design and development.

International players in the LED industry have made significant inroads into the Penang export hub. With its head start in electronics, Penang could become a major global LED hub. The MNEs with production plants in Penang include Osrum Opto Semiconductors, Philips Lumileds, Rubicon Technology, Globetronics and Dsem and IntraMas. Osrum, which came to Penang in the early 1970s to assemble general lighting, now ranks second in the world in the LED industry. It has wafer fabrication, assembly and testing operations in Penang. Osrum's largest production plant outside Germany and its global R&D centre is in Penang.

Phillips Lumileds, which has assembly and testing operation in Penang, ranks fifth in the world LED industry. SILQ, a joint venture of Semileds Corporation (a LED manufacturer in the league of Lumileds and Osrum) and IQ Group Berhad, is involved in LED packaging, modules and final LED lightings in Penang. Two local contract manufacturers, Globetronics and CS Opto, have made significant inroads in to LED industry in recent years benefitting from the emergence of local LED final product design houses.

The LED industry is poised to grow, driven by increased LED penetration rates in mobile handsets, notebooks, LCD (liquid crystal display) televisions, automotive and general lighting. LED television back lighting (signs and display segment) is considered to be the most important LED growth driver over the coming years. Another important segment for rapid growth of LED lighting is general lighting: some countries have imposed environmental regulations to phase out or ban the use of incandescent lighting. Electricity consumption of LED lighting is six-to-seven times lower than that of incandescent lighting. LED has gained a new lease of life in recent years with increasing demand lighting services from the fast growing economies, in particular China and India, where providing grid electricity to rural areas is a very difficult task.³⁴

In the medical services and equipment industry, B. Braun has been in Penang since 1980. It has a plan to invest RM 1.75 billion in its Penang plant by 2013. This will expand production capacity by 131% and increase production by 50% by 2013. In recent years, a number of newcomers have entered the industry: Cardinal Health, St Judes, Accellent, Small Bone Innovation and Symmetry Medical.

Cardinal Health, a 'Fortune 18' company, is one of the largest healthcare services providers in the world, supplying pharmaceuticals and products. Symmetry Medical is the

largest contract manufacturer of orthopaedic devices for big companies such as Stryker, Johnson & Johnson, Zimmer, Bioner and Smith & Nephews. Cardinal Health also designs, develops and produces products for other segments of the medical device market, including arthroscopy, dental, laparoscopy, osteobiologics and endoscopy. Cardinal Health also provides specialized products and services to non-healthcare markets, such as aerospace. It chose Penang because of accessibility to the major markets of China and Japan, ease of communication, a strong legal system with intellectual property protection and the ease of integration for expatriates.

Symmetry Medical, a provider of products to the global orthopaedic device industry and other medical markets, announced in 2008 that it plans to invest US\$ 20 million over the next three years to expand its Malaysian manufacturing, design and development capabilities. The company is planning to move its existing facility to a larger, new 50,000 square foot facility in Penang. This facility will house the regional design and development centre together with a regional logistics operation, and enable the parent company to bring its Total Solutions® business model to the Asian market.

There is a strong presence of established supporting industries ranging from sterilization services, sterile medical packaging, precision engineering, tool and die making, contract molding and assembly, and machinery fabrication in Malaysia.

The availability of the supporting industries positions Malaysia as an ideal location for the manufacture of medical devices with the potential to develop into a medical device hub in Asia.

CONSIDERABLE PROSPECTS FOR EXPANSION

In sum, after 40 years of development, the Penang export hub has a range of industries, including electronics, electrical goods, machine tools, general lighting equipment and light-emitting diodes, and medical devices. Due to domestic cost pressure and the emergence of competitive production locations, Penang is no longer an attractive location for assembly of consumer electronics and electrical goods and low-end component assembly within the electronics value chain. These activities have shrunk in recent years.

However, MNEs involved in the electronics design, assembly and testing activities have restructured and expanded their operations in Penang. At the same time, some new dynamic product lines have emerged with considerable prospects for further expansion, including LEDs, photovoltaic design and development, and medical devices.

INVESTMENT TRENDS AND COMPANY PROFILES

This section aims to provide some insights into investment trends and the profile of firms operating in Penang by piecing together information from various sources.

Systematic analysis of trends in FDI in Penang is hampered by dearth of data. At the formative stage until about the early 1980s, PDC maintained continuous records of investments based on administrative records and annual surveys of firms. In recent years, publicly available data on realized projects are limited to surveys periodically commissioned by PDC. As the response rate varies significantly among the survey years, data from these surveys do not permit year-to-year comparisons. Moreover, the response rate to questions relating to sales turnover and investment has been very poor.

In 1975, there were seven branch plants of MNEs (henceforth referred to as foreign affiliates or foreign firms) employing around 2,000 workers in the Bayan Lepas FTZ.³⁵ By the mid-1980s the number of firms had increased to 59 and they employed 39,600 workers (PDC 1988). Two decades later, the 2005 Malaysian Manufacturing Census counted 203 foreign firms employing 215,517 workers (see table 12).

With a modest start in the 1970s, there was a rapid expansion of MNE entry until about the mid-1990s, as shown in table 12. There has been a notable decline in the number of firms commencing commercial production over the past 10 years. This reflects gradual erosion of Malaysia's attractiveness for low-end activities in the electronics value chain and final assembly of consumer electrical and electronics products due to increasing domestic wages and the emergence of alternative low-cost investment locations within the region.

The only available continuous data come from the approval records of the MIDA, summarized in table 13. The number of approved projects increased, in the 1980s and 1990s, as Penang was very attractive to MNEs producing consumer electrical goods and electronics and computer peripherals.

Following a notable decline during the Asian financial crisis in the second half of 1990s, approved projects have picked up since 2000. The number of projects approved during 2000-2008 was much larger than the number of firms in operation belonging to younger operational age brackets, as illustrated in table 12. This difference reflects that most new project proposals came from firms already with production plants in Malaysia rather than from new entrants. This observation is consistent with findings from interviews with firms operating in Penang.

Allowing for some erratic fluctuations, capital per worker in approved projects has increased significantly over the past two decades, as illustrated in the last column of table 13. This pattern points to a gradual but persistent shift in the production structure towards product lines characterized by greater capital intensity as the labour market tightens.

Foreign firms dominate manufacturing in Penang (see table 14). In 2007, they accounted for over 85% of total sales turnover and over 72% of total employment in the manufacturing sector in Penang, even though they accounted for only about one-fifth of the total number of firms in operation. The top 11% of foreign firms in size accounted for 82% of total sales and 68% of total employment.

The size distribution, measured by employment headcount, of the top 25 foreign and local firms is depicted in tables 15 and 16. There are 25 foreign firms (with the majority clustering at a median of around 3,000 workers), accounting for over 75% of the total manufacturing employment in Penang. By contrast, employment in the top 25 local firms varies in the range of 200-1,400 with the majority clustering at the lower end. These firms account for about 8% of total manufacturing employment.

In the 1970s, when the first wave of MNEs came to Penang, there was a general perception that they would soon prove to be 'fly-by-night' operators. However, the data on firms in operation clearly indicates that most of these firms have become deeply rooted in Penang, as illustrated in tables 12 and 15. Seven of the Eight Samurai are among the 25 largest foreign firms (see table 15).

Table 12: Branch plants of multinational enterprises operating in Penang, 1970-2004

Commencement year	Number of firms	Gross output		Employment	
		RM million	%	Headcount	%
Pre-1970	8	1 054	1.5	3 452	3.6
1970-1974	9	6 301	9.2	11 769	12.3
1975-1979	5	215	0.3	1 061	1.1
1980-1984	11	1 242	1.8	11 136	11.6
1985-1989	52	7 873	11.6	23 454	24.4
1990-1994	63	9 222	13.5	18 301	19.1
1995-1999	32	40 435	59.4	21 273	22.2
2000-2004	23	1 783	2.6	5 585	5.8
Total	203	68 125	100.0	96 031	100.0

Source: Compiled from unpublished returns to the Census of Manufacturing Industries 2005, Department of Statistics, Malaysia.

Table 13: Approved investment in Penang, 1980-2008

Year	Number of projects	Employment (headcount)	Investment		Capital per worker (US\$)
			US\$ million	Foreign share (%)	
1980	48	5 522	80.6	45.2	14 588
1981	59	3 655	47.2	39.1	12 923
1982	40	3 842	146.0	38.1	37 998
1983	61	7 275	111.6	39.1	15 345
1984	56	5 158	114.5	24.8	22 205
1985	66	8 184	139.2	33.9	17 011
1986	53	4 101	68.1	50.4	16 607
1987	59	16 662	252.3	86.4	15 143
1988	73	17 833	278.6	76.3	15 622
1989	115	27 032	436.7	87.2	16 157
1990	132	24 952	690.3	79.8	27 666
1991	125	22 455	554.6	66.2	24 697
1992	119	14 295	430.3	57.0	30 099
1993	87	10 378	200.8	50.2	19 346
1994	95	15 203	356.1	70.4	23 423
1995	89	13 779	641.5	39.9	46 559
1996	97	11 993	1 266.1	65.7	105 569
1997	90	9 736	515.1	28.9	52 906
1998	104	10 911	684.3	47.5	62 713
1999	95	14 928	1 257.3	96.2	84 225
2000	132	15 327	1 173.6	79.9	76 569
2001	124	14 630	1 009.8	93.2	69 023
2002	110	13 487	631.1	82.8	46 796
2003	137	9 890	506.0	75.7	51 168
2004	144	9 235	534.3	50.0	57 854
2005	148	21 642	1 221.2	84.5	56 428
2006	156	13 539	1 458.7	73.2	107 738
2007	134	8 833	1 442.2	65.9	163 275
2008	151	22 215	2 932.0	50.1	131 981

Source: SERI database (based on investment approval records of the Malaysian Industrial Development Authority).

Table 14: Ownership structure of manufacturing firms in Penang, as of August 2008*

	Firms (%)	Sales (%)	Employment (%)
Foreign-owned	22.9	85.6	72.3
Large enterprises**	11.3	82.0	68.3
SMEs	11.6	3.6	3.9
Local	77.1	14.4	27.7
Large enterprises**	9.7	9.3	12.6
SMEs	67.4	5.1	15.2

Source: SERI 2008.

Notes: * Based on information provided by 629 of 1,193 enumerated firms.

** Enterprises with annual revenues of more than RM 25 million (US\$ 9 million) or more than 150 full-time employees.

Table 15: Top 25 foreign enterprises in Penang: employment and product lines, as of August 2008

	Company	Host country	Employment (headcount)	Years in operation	Activities in Penang
1	Intel Technologies	United States	10 304	>35	Motherboards
2	Flextronics Technology	Singapore	7 000	15-20	PCBA and system integration, process and test devt Design, Failure Analysis, Total Supply Chain solution
3	Motorola Technologies	United States	4 811	25-30	2-way radios, wireless broadband communications, equipment, system, rechargeable batteries, accessories
4	B Braun Medical Industries	Germany	4 700	25-30	Medical and surgical equipment and related services
5	WD Media (formally Komag)	United States	4 569	15-20	Thin film magnetic disks and plated polished substrates
6	Dell	United States	4 500	12-15	Computer assembly and world-wide customer service
7	Jabil Circuit	United States	4 207	20-25	Electronic manufacturing services
8	Cannon Electronics	Japan	3 805	5-10	Magnetic heads and component cameras
9	Sony	Japan	3 750	20-25	Consumer electronics
10	Renesas Semiconductor	Japan	3 700	>35	Linear and digital integrated circuits, power transistors and transistor diodes
11	Plexux Manufacturing	United States	3 389	10-15	Computer peripherals and PCBs
12	Agilent Technologies	United States	3 358	>35	Microwave devices (microcircuits), test accessories, amplifiers, transceivers and test
13	Fairchild	United States	2 980	>35	Semiconductor back-end manufacturing and administrative and engineering services
14	Kobe Precision	Japan	2 740	15-20	Ground aluminium substrate
15	Seagate Penang	United States	2 733	20-25	Hard disk drives
16	Osrum Opto Semiconductors	Germany	2 731	>35	Light-emitting diodes
17	Ase Electronics	Chinese Taipei	2 530	20-25	Integrated circuit packaging, testing, and turnkey services
18	Sanyo Automeia	Japan	2 080	20-25	Car radios and CD-changers
19	Robert Bosch	Germany	2 000	> 35	Car parts and automotive semiconductors
20	Philips Lumiled	Netherlands	1 600	10-15	High-power LED lighting and solid state lighting solutions
21	Sammna Science Systems	United States	1 203	10-15	PCBA and system integration
22	Linear Semiconductor	United States	1 167	10-15	Integrated circuits
23	Avago Technologies	United States	961	>35	Analogue, mixed-signal and optoelectronic components and Wafer Fabrication
24	Altera	United States	950	15-20	R&D relating to VLSI design, layout, test and software development
25	Advanced Micro Devices	United States	896	> 35	Integrated circuits

Source: SERI (2008) supplemented by information from Invest Penang (Penang Development Corporation), company websites and interviews with company managers.

Table 16: Top 25 local (Malaysian) enterprises in Penang, as of August 2008

	Company	Employment (headcount)	Years in operation	Activities
1	Precico	1 400	16-20	Plastic component parts
2	Aik Joo Can Factory	1 300	>20	Plastic jerry cans
3	TSDK Technologies	961	16-20	Computer peripherals, plastic containers and electronic and electrical devices
4	SDKM Technologies	833	16-20	Computer peripherals, plastic containers and electronic and electrical devices
5	LKT Precision Engineering	692	10-15	Automation equipment, precision tools and precision plastic parts etc.
6	CPI (Penang)	654	16-20	Car audio, wireless networking devices and parts
7	Pentamaster Corporation	601	16-20	Automation solutions
8	Dora Knitwear	580	>20	Knitted sweaters and knitwear
9	Dufu Industries	500	0-5	Electronics devices and parts
10	Eng Teknologi Holdings	559	>35	Data storage products
11	KESP	535	>20	Integrated circuit burn in/EMS
12	Alliance Contract Manufacturing	508	10-15	Automation-water/semiconductor handling equipment
13	Nationgate Technology	453	6-10	SMT projects, PCB assembly and storing, and network
14	CAB Cakaran	409	3-5	Integrated poultry products
15	Precico Electronics	330	16-20	Plastic component parts
16	Southern Pipe Industry	297	>20	Steel pipes
17	M-Pol Rubber Products	275	>20	Household and water support products
18	Eng Kah Enterprise	273	>20	Soap and cosmetics
19	Eonmetall Industries	250	16-20	Fabricate machinery for metal work
20	Double Grade Non-Woven Industries	250	16-20	PC floor covering material for industrial use
21	Asia File Products	241	10-15	Files and stationery
22	Alo Industries	210	16-20	Electronic/industrial packaging material
23	Ayza Industries	205	>20	Logistic, trucking and warehousing
24	Industrial Concrete Products	200	23	Non-metallic mineral products and concrete piles
25	Fuji Lift and Escalator Manufacturing	200	16-20	Manufacture lift parts and assemble lifts

Source: Compiled from SERI (2008).

The Malaysian affiliates and firms that arrived later have now become major players in the regional and global operations of their parent companies. United States-based MNEs are the dominant players in the Penang export hub, followed by Japanese and German MNEs (see table 17).

When the first MNE arrived in the Bayan Lepas FTZ in 1972, there were only 160 registered manufacturing firms in Penang and the average firm employed 75 workers.³⁶ The number of local firms mushroomed from the early 1980s. Some emerged out of existing small-scale operations, but most were newly created, often by former MNE employees.

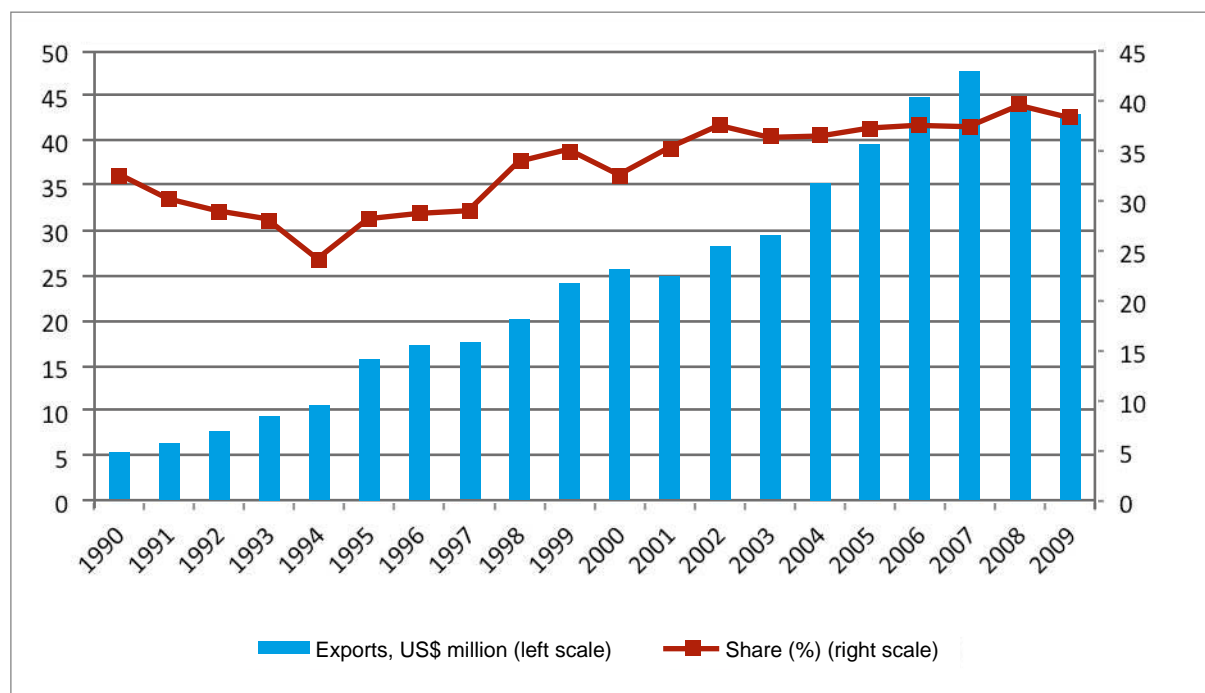
EXPORT PERFORMANCE

In 2009, manufactured goods accounted for 97% of total merchandise exports from Penang, up from 89% in the early 1990s. The commodity category of machinery, Section 7 of the Standard International Trade Classification (SITC), has continued to account for the lion's share of electronics components, which accounted for almost 90% of machinery exports (see table 18). However over the past two decades, there has been some modest diversification of the commodity mix. According to the data for 2005, the only year for that disaggregated data for Penang could be found, office and accounting machinery (SITC 30) and radio/TV, and medical appliances and components (SITC 32) accounted for 45% and 38.9% of total manufactured goods exports (see table 19).

In 2005, foreign firms accounted for 70% of total manufactured exports (see table 19). The export-output ratio for foreign firms was 78% compared to 33% for local firms. The lower figure for the local firms mostly reflects that most of the local firms in the electronics industry are parts and components suppliers to the foreign firms. The bulk of direct exports by local firms are concentrated in consumer electronics and electrical goods (SITC 322 and 323), which are relatively more labour intensive and technologically less sophisticated. Foreign firms' export composition is relatively more diversified, but electronics accounts for nearly two-thirds of total exports.

In 1998, manufactured goods exports from Penang increased from US\$ 90 million in 1973 to about US\$ 4.5 billion – amounting to 34% of total manufactured exports from Malaysia – in the late 1980s. Export growth has continued at an impressive rate during the ensuing two decades, notwithstanding a mild slowdown following the collapse of the dot-com bubble in 2000 and the onset of the global financial crisis in 2008. The growth rate of exports from Penang has continuously been faster than that of total manufactured goods exports from Malaysia. Penang's share in total manufactured goods exports from Malaysia was 39% in 2009, up from about 32% in 1997 (see figure 9; table 18). In recent years, Penang has accounted for almost half of the total machinery – electronics and electrical goods – exports from Malaysia.

Figure 9: Manufactured exports from Penang: value and share in Malaysian exports*, 1990-2009



Source: Based on data compiled from unpublished returns to Manufacturing Census 2005, Department of Statistics, Malaysia.

Note: * Annual average growth rates (%).

Table 17: Home-country profile of foreign firms in Penang, 2007

2007	Employment	%	Number
United States	53 208	46.1	45
Japan	23 643	20.5	41
Germany	12 869	11.1	14
Singapore	10 024	8.7	20
Chinese Taipei	6 932	6.0	35
Netherlands	1 600	1.4	1
Indonesia	683	0.6	3
France	679	0.6	1
Finland	656	0.6	3
Italy	651	0.6	1
United Kingdom	500	0.4	1
Denmark	446	0.4	2
Hong Kong SAR	282	0.2	3
Switzerland	159	0.1	1
Other	3 153	2.7	24
Total	115 485	100.0	195

Source: Compiled from unpublished returns to Penang Industry Survey 2007 conducted by SERI in 2008 for Invest Penang.

Table 18: Merchandise exports from Penang – value, composition and share of total Malaysian exports

	1990-1991*	1995-1996*	2000-2001*	2005-2006*	2007	2008	2009
(a) Exports, US\$ billion	18.7	58.0	75.5	113.4	127.2	110.8	111.3
(b) Composition (%)							
Primary products	10.9	6.0	2.4	3.2	3.4	3.6	2.6
Food beverages and tobacco	3.0	1.2	0.8	0.9	1.1	1.2	1.2
Crude materials	4.3	2.7	1.0	1.6	1.5	1.7	1.1
Animal and vegetable oils and fats	3.6	2.0	0.6	0.6	0.8	0.7	0.4
Manufacturing	88.9	93.8	96.6	96.2	95.8	95.8	96.8
Chemicals	1.3	2.0	2.3	2.3	2.7	2.7	2.6
Resource-based manufactured goods	9.3	5.8	3.3	3.5	4.3	5.1	4.0
Machinery and transport equipment	56.9	74.9	82.3	80.4	77.8	76.3	78.3
Miscellaneous manufacturing articles	20.5	11.1	8.7	9.9	11.0	11.7	11.9
Miscellaneous transactions and commodities	0.4	0.2	0.5	0.7	0.7	0.6	0.5
(c) Share in total Malaysian exports (%)							
Primary products	9.2	9.1	8.2	9.5	8.1	5.8	5.5
Food, beverages and tobacco	14.6	10.8	10.3	11.4	11.9	9.4	10.1
Crude materials	6.7	10.4	11.8	16.9	15.3	14.4	13.0
Animal and vegetable oils and fats	10.7	7.2	4.4	4.0	3.6	1.8	1.3
Manufacturing	31.4	28.5	33.9	37.4	37.4	39.6	38.5
Chemicals	15.5	14.8	16.1	12.2	12.7	10.6	12.0
Resource-based manufactured goods	29.0	18.0	16.1	15.0	15.5	14.8	14.1
Machinery and transport equipment	30.6	31.4	38.1	44.0	44.8	53.0	47.4
Miscellaneous manufacturing articles	40.4	29.1	29.5	34.6	36.2	34.2	35.7
Miscellaneous transactions and commodities	20.0	3.5	15.6	11.9	14.4	1.2	18.1
Value (RM million)	24.5	25.1	31.5	33.8	32.9	28.2	33.0

Source: Compiled from customs returns of Penang (SERI database) and UN Comtrade Database (for total Malaysian exports).

Note: * Two-year average.

Overall, the patterns revealed by the data run counter to the pessimistic view that the emergence of China as an export powerhouse has crowded out Penang's export performance. This inference is also consistent with the patterns of structural shifts in the activities of MNEs in Penang that we have observed earlier. Shifts in MNE operations in Penang towards high-value component design, assembly and testing in the global value chain as well as towards headquarter functions and providing global services have been aided by the rapid expansion of final assembly in China.

To probe the role of this shift in the product mix in export expansion, export value, volume and price (unit value) indices for electronics exports have been compiled from Malaysia over the period 1997-2009. (Separate export data are not available for Penang, but the national data are representative enough because Malaysia's exports in this product category have predominantly originated in Penang.) The indices are depicted in figure 10. Export growth in this product category since about 2001 has been largely driven by price (unit value) increases rather than volume expansion. The value of total exports has moved in tandem with export price, while export volume has remained virtually flat during this period.

A VIBRANT INDUSTRIAL CENTRE WITH ECONOMY-WIDE IMPACT

Export-led industrialization transformed Penang from the site of sluggish primary production into an international

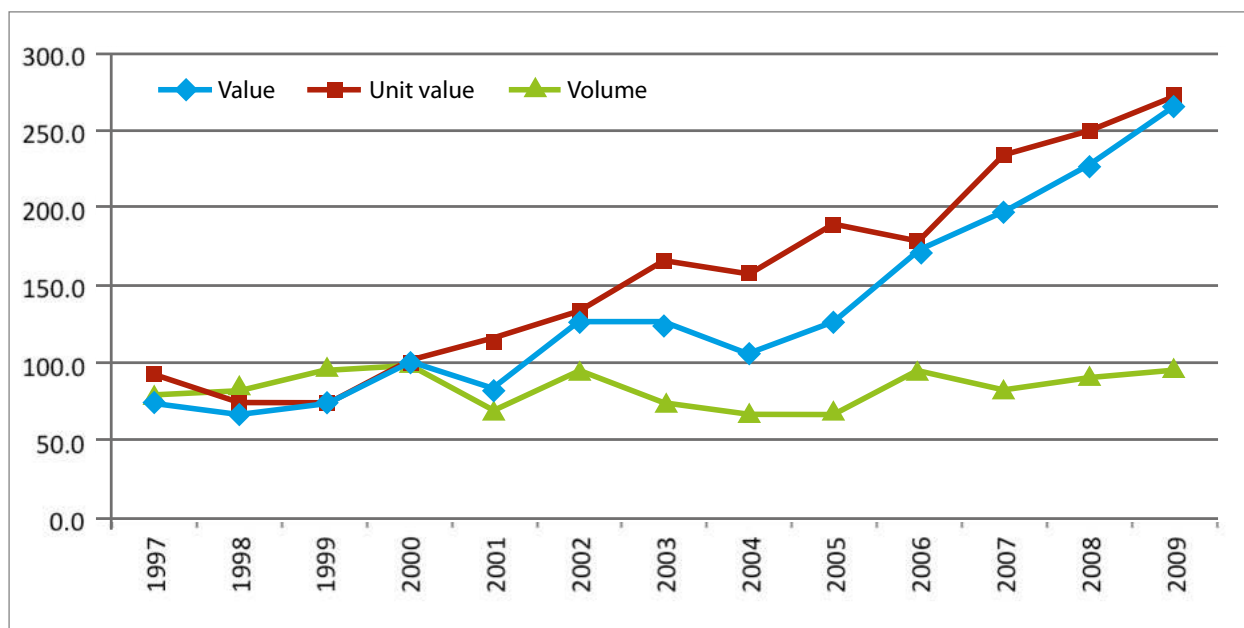
manufacturing hub within a decade. The surplus labour pool of 80,000 workers, estimated by the Nathan Report in 1969, had already been absorbed into the manufacturing sector and related services. The state transformed into a vibrant industrial centre with electronics factories taking the lead. Growth continued unabated following a short slowdown during the global recession in the mid-1980s. At a 2003 conference organized by PDC to celebrate the 30 years of industrialization in Penang, then Prime Minister Mahathir summed up Penang's remarkable economic transformation as follows:

"I remember the time when Tun Razak [then Prime Minister of Malaysia] told me that Dr. Lim Chong Eu had managed to attract some investors to Penang in the electronics industry. I was rather sceptical; what are we going to do with this new-fangled industry?"

We did not understand much about electronics then and soon after that ... Tun Razak ... told me that Penang was short of labour; the electronics industry had created so many jobs that Penang had to get workers from the mainland."³⁷

In the early 1970s, Penang's per capita GDP was about 10% lower than the national average. At the state level it was 70% lower than the state of Selangor, which was the prime focus of the national development strategy in the post-independence period. Rapid export-led growth elevated Penang to the status of the richest state within two decades (see table 20).

Figure 10: Value, volume and price (unit value) indices of electronics exports from Malaysia, 1997-2009



Source and methodology: Compiled from UN Comtrade Database. Covers 20 products at the HS 6 digit level for which volume data are available for all years during the period 1997-2009. These products account for about 70% of the commodity category of electronics under the Standard International Trade Classification (SITC 77).

Table 19: Penang's manufactured exports: composition, export/output ratio and foreign firms' share in exports, 2005

Tariff classification	Product	Composition (%)			Export/output (%)			Foreign firms' share (%)
		Total	Local	Foreign	Total	Local	Foreign	
15-16	Food, beverages and tobacco	1.7	4.9	0.3	26.2	25.2	35.2	12.9
17	Textile	0.8	0.2	1.1	72.2	27.0	82.8	92.9
18	Wearing apparel	0.5	0.5	0.5	32.4	17.0	49.9	72.1
19	Leather products and footwear	0.0	0.1	–	20.5	20.5	0.0	0.0
20	Wood products	0.0	0.0	–	6.0	6.0	0.0	0.0
21	Paper and paper products	0.2	0.5	0.0	10.7	9.4	36.2	16.1
22	Printing and publishing	0.1	0.2	0.0	6.8	6.6	52.4	3.0
24	Chemicals	3.9	2.9	4.4	61.0	34.7	78.3	77.5
25	Rubber products	1.5	2.4	1.1	34.0	28.4	41.8	51.3
26	Glass and glass products	0.1	0.2	0.0	12.4	20.6	1.6	5.5
27	Non-ferrous metal products	0.8	2.5	0.1	8.6	9.2	3.9	4.9
28	Structural metal products	1.0	1.8	0.6	33.8	23.8	72.3	44.1
29	Machinery and equipment, non-electrical	0.4	0.7	0.3	28.1	26.3	30.1	51.0
291	General purpose machinery	0.2	0.3	0.2	46.0	29.9	75.5	58.0
292	Special purpose machinery	0.2	0.4	0.2	22.2	27.3	18.4	47.2
30	Office, accounting and computing machinery	44.9	1.6	63.6	82.9	28.3	84.7	98.9
31	Electrical machinery	2.7	0.8	3.6	68.5	32.3	76.7	91.3
311	Electrical motors, generators and transformers	0.1	–	0.2	79.3	–	79.3	100.0
312	Electricity distribution and control apparatus	0.1	0.1	0.2	61.2	30.1	86.0	78.3
313	Insulated wires and cables	0.6	0.7	0.5	48.0	35.6	60.9	62.2
315	Electric lamps and lighting equipment	1.9	–	2.8	79.8	–	79.8	100.0
32	Radio/TV, medical appliances and components	38.9	75.9	22.9	81.1	90.1	70.8	41.0
321	Electrical valves, tubes etc.	32.5	58.5	21.2	85.3	90.5	79.8	45.5
322	Radio, television transmitters and apparatus	5.2	17.3	–	96.8	96.8	–	–
323	Medical appliances and equipment	1.2	0.1	1.7	26.5	4.8	29.2	98.0
33	Scientific/precision equipment	0.5	–	0.6	36.8	0.0	36.8	100.0
331	Measuring and control equipment	0.4	–	0.5	33.3	0.0	33.3	100.0
332	Optical instruments	0.1	–	0.1	69.7	0.0	69.7	100.0
35	Transport equipment	0.1	0.4	–	32.1	32.1	–	–
36	Miscellaneous manufacturing	1.9	4.4	0.8	53.9	58.7	17.6	3.8
361	Furniture	0.2	0.6	–	50.4	50.4	–	0.0
369	Manufactures not elsewhere classified	1.0	3.2	0.1	54.6	60.6	17.6	4.5
Total		100	100	100	66.7	52.4	76.1	69.8
US\$ million		19 672	5 949	13 723	–	–	–	–

Source: Compiled from unpublished returns to the Manufacturing Census 2005, Department of Statistics, Malaysia.

Note: – Zero or negligible (less than 0.05).

In 2010, Penang's estimated per capita GDP was RM 30,860 (US\$ 8,700), 57% higher than the national average and 30% higher than Selangor.

A comparison based on per capita GDP exaggerates Penang's level of economic activity among the Malaysian states because, as discussed below, a larger share of income generated in Penang accrues to foreign companies as their share of profits. However, even when household monthly income is used as an indicator of economic performance, Penang ranks well above the national average. Household income is higher than that in Penang only in Selangor and the federal territory of Kuala Lumpur (see table 21).

The poverty rate – the percentage of people living below the national poverty line – has also been remarkably lower in Penang compared to the other Malaysian states (see table 21). Since the early 1990s, the unemployment rate in Penang, which has varied annually between 0.5% and 2.5%, has been much lower than the national average of 1.5% to 4.5%.³⁸

Manufacturing has been the engine of growth in Penang, accounting for over 40% of GDP over the past three decades with a mild upturn in recent years (see table 22). By contrast, manufacturing accounted on average for only 46% of GDP in 2000 and for 41% of total labour deployment in 2001 in Malaysia. This figure declined to 36% in 2008 because of faster growth in services. (See table 22.) Foreign firms play a much more important role in Penang's economy compared to other states in Malaysia. (See table 23 and 24.) For instance, in 2005 foreign firms accounted for over 61% of

manufacturing value added in Penang compared to about 37% in the entire country.

Criticism often directed at export-oriented growth through global production sharing concerns the weak linkage effects of the export sector on the rest of the economy. In Penang, the share of local raw material to total raw material used increased from 3% in 1976 to 11% in the early 1980s.³⁹ After two-and-a-half decades of manufacturing expansion, this had increased only to about 18% by 2005.⁴⁰ The use of local inputs in this industry could be somewhat higher in Penang because the local vendor network there is relatively well developed compared to elsewhere in the country.⁴¹

Linkage effects of firms operating within global production networks generally tend to be less than those of domestic market-oriented manufacturing firms. This is because, unlike meeting consumer requirements in domestic markets, producing for highly competitive global markets calls for imported inputs meeting exact quality requirements and specifications. More importantly, input structures within global production networks are determined largely by corporate decisions of MNEs at the global level rather than by relative-cost differential and other factors specific to a particular production location.

Despite the weak input linkages, foreign firms have significantly impacted the domestic economy through human capital development. The talent pool developed over the past four decades is now Penang's primary attraction for MNEs for locating their upper-end activities and headquarter functions within global production networks.

Table 20: Per capital GDP in Malaysia and Malaysian States and federal territories (in RM)

	1970	1975	1980	1995	2000	2005	2010
Malaysia	994	1431	1681	10 756	14 584	19 189	19 655
States relative to Malaysia (%)							
Johor	90.7	94.6	93.6	93.0	96.0	98.0	79.6
Kedah	67.0	54.8	53.6	59.0	61.0	63.0	50.4
Kelantan	46.6	38.1	37.5	42.0	43.0	45.0	29.7
Malacca	80.4	80.2	72.4	105.0	108.0	112.0	101.1
Negeri Sembilan	98.7	91.0	88.2	84.0	88.0	91.0	103.6
Pahang	59.6	51.6	59.8	70.0	71.0	76.0	83.6
Penang	91.5	115.8	113.1	140.0	147.0	149.0	157.7
Perak	98.9	85.6	84.1	86.0	90.0	97.0	61.9
Perlis	–	–	–	71.0	74.0	79.0	63.8
Sabah	–	–	–	67.0	63.0	59.0	49.7
Sarawak	–	–	–	86.0	88.0	88.0	108.5
Selangor	162.9	186.0	183.4	132.0	119.0	111.0	121.4
Terengganu	59.6	51.6	59.8	154.0	158.0	154.0	71.5

Source: For 1970 and 1975 from Spinanger (1986), table 1.3; Government of Malaysia (2001, 2006, 2010).

Notes: At 1987 prices. Dashes indicate information that is not available.

Most MNEs have indigenized their workforce; only 8% of CEOs in foreign companies in Penang are foreigners. Many MNEs draw on managerial and technological expertise of their Penang affiliates when expanding operations to other countries.

A major concern in the contemporary Malaysian policy debate is the slow process of technological upgrading and productivity growth in export-oriented industries.⁴² There are no robust estimates available to check the validity of this concern for Penang. However, it seems to perform better than the rest of Malaysia in R&D activities, as revealed by patent registration data (see figure 11). During 2001-2006 Penang accounted for 37.2% of Malaysia's registered patents, up from 10.3% during 1976-1985.

A comparative study of corporate innovative activities in Singapore, Penang and concludes, 'Penang as a high-tech enclave is most certainly not representative of Malaysia as a whole'.⁴³ The study finds that despite Singapore's clear lead over Malaysia at the national level, Penang and Singapore are at a similar stage of technological development, and Bangkok clearly trails behind both.

Table 21: Mean monthly gross household income and incidence of poverty, 2004 and 2009

	Mean household income (RM)		Incidence of poverty (%)	
	2004	2009	2004	2009
Malaysia	3 249	4 025	5.7	3.8
States as percentage of national mean				
Johor	94.7	95.3	2.0	1.3
Kedah	65.4	66.3	7.0	5.3
Kelantan	56.3	63.0	10.6	4.8
Malacca	85.9	104.0	1.8	0.5
Negeri Sembilan	88.8	88.0	1.4	0.7
Pahang	74.2	81.5	4.0	2.1
Penang	108.7	109.5	0.3	1.2
Perak	67.9	69.8	6.3	3.5
Perlis	63.0	65.0	4.9	6.0
Sabah	73.4	77.1	23.0	19.7
Sarawak	83.9	89.0	7.5	5.3
Selangor	158.7	148.1	1.0	0.7
Terengganu	61.1	50.1	15.4	4.0

Source: Government of Malaysia (2006 and 2010).

Table 22: Composition of GDP and employment in Penang, 1970-2008

	GDP %				Employment %	
	1970	1990	2000	2008	2001	2008
Agriculture and forestry	3.2	3.2	2.4	1.2	2.4	1.6
Manufacturing	43	43.1	45.7	54	40.8	35.8
Construction	3.2	3.1	2.4	1.6	6.4	5.8
Services	50.6	50.6	49.5	42.5	50.4	56.8
Total	100	100	100	100	100	100

Source: SERI (2010), based on data provided by the Department of Statistics, Malaysia.

Table 23: Foreign-ownership in Malaysian manufacturing – Penang in the national context, 2005 (percentage shares)

	Value added	Employment	Salaries and wages	Fixed assets
Foreign-owned firms share (%)				
Penang	61.4	44.6	54.5	52.9
Johor	48.5	42.0	45.3	52.6
Malacca	29.6	43.6	43.5	20.8
Selangor	42.4	33.3	35.6	32.3
Other states	21.8	20.7	25.1	21.8
Malaysia	36.6	32.5	37.5	31.8
Distribution of foreign-owned manufacturing by state (%)				
Penang	24.8	17.7	23.8	17.5
Johor	17.6	27.7	22.5	24.5
Malacca	4.7	6.6	5.2	3.0
Selangor	29.0	25.2	28.4	26.1
Other states	23.8	22.8	20.2	28.9
Malaysia	100	100	100	100
Distribution of total manufacturing by state (%)				
Penang	14.51	12.87	16.25	9.95
Johor	13.12	21.36	18.54	14.13
Malacca	5.74	4.83	4.38	4.40
Selangor	24.8	24.5	29.8	24.6
Other states	41.87	36.46	31.03	46.88
Malaysia	100	100	100	100

Source: Compiled from unpublished returns to the Manufacturing Census 2005, Department of Statistics, Malaysia.

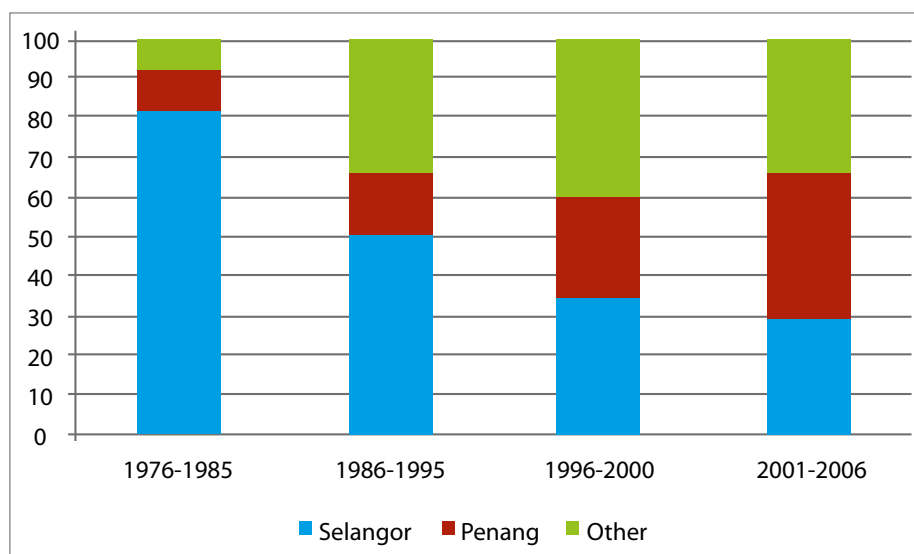
Table 24: Manufacturing employment, capital per worker, labour productivity and average wage/salary: Penang in the national context, 2005

	Employment (number)	Employment (%)	Labour productivity (US\$)	Capital per worker (US\$)	Average wage/salary
Johor	357 733	100.0	12 043	19 844	4 469
– Foreign firms	150 356	42.0	13 904	24 847	4 817
– Local firms	207 377	58.0	10 693	16 216	4 217
Malacca	80 994	100.0	23 274	27 277	4 665
– Foreign firms	35 307	43.6	15 787	13 027	4 656
– Local firms	45 687	56.4	29 059	38 289	4 673
Penang	215 517	100.0	22 100	23 192	6 504
– Foreign firms	96 037	44.6	30 447	27 523	7 950
– Local firms	119 480	55.4	15 391	19 711	5 341
Selangor	410 160	100.0	19 828	30 192	6 264
– Foreign firms	136 598	33.3	25 242	29 245	6 688
– Local firms	273 562	66.7	17 125	30 664	6 053
Other	610 759	100.0	22 509	38 560	4 380
– Foreign firms	126 297	20.7	23 737	40 619	5 309
– Local firms	484 462	79.3	22 189	38 023	4 138
Malaysia	1 675 163	100.0	19 602	29 991	5 148
– Foreign firms	544 595	32.5	22 068	29 313	5 942
– Local firms	1 130 568	67.5	18 414	30 318	4 765

Source: Compiled from unpublished returns to the Manufacturing Census 2005, Department of Statistics, Malaysia.

Note: Values in Malaysian ringgit converted at US\$/RM = 3.8.

Figure 11: Malaysian patent registration: Selangor, Penang and other states, 1976-2006



Source: NEAC 2009, Part 1, p. 183.

CONCLUSION

The Penang export hub has matured and consolidated its position within global production networks over the past four decades. Concerns that the Malaysian industry has 'reached a point of saturation and its survival depends on the capacity to climb up the technology ladder',⁴⁴ and that 'Malaysia's manufacturing performance has stalled over time and the sector remains at odds with the objective of 'moving up the value chain'⁴⁵ are certainly not consistent with Penang's recent growth experience.

As a result of increasing domestic wages and the emergence of competing low-cost production locations, Penang's attractiveness for low-end activities and final assembly within global production chains has been rapidly eroding over the past two years. But this has not resulted in a hollowing out of the Penang export hub. Firms involved in design, assembly and testing activities in the electronics and electrical goods value chain have begun to expand and consolidate their operations in Penang.

More importantly, based on the early-mover advantage in electronics and the skilled labour pool developed over the years, the production base has begun to diversify into a number of electronics-related dynamic product lines with brighter growth prospects. These include medical services and equipment, LEDs, and photovoltaic design and development.

China's rise as the premier assembly centre does not seem to have crowded out Penang's export performance. On the contrary, there appears to be a complementary relationship between China's rise as the premier assembly centre within global production networks and export performance in Penang. Rapid expansion of final assembly in China has

been accompanied by a notable shift in MNE operations in Penang towards high-value component design, assembly and testing in the global value chain. Reflecting this structural shift, expansion of exports from Penang in recent years has been driven predominantly by price increases rather than volume expansion.

What explains Penang's success? Penang started the process of export-oriented industrializations with some unique advantages. It had a long tradition of both English and Chinese education, with a literacy rate well above the national average. From the colonial era it inherited fairly well developed trade-related infrastructure and institutions. However, these initial advantages would not have been translated into a notable economic success if it were not for a proactive state government led by Chief Minister Lim Chong Eu, who embarked on a visionary strategy to unleash the island's growth potential. The strategy carefully mitigated the adverse impact of the affirmative action elements of the 1971 New Economic Policy on private-sector initiatives, while benefiting from Malaysia's long-standing commitment to an open trade and investment policy stance, and emphasis on export-oriented growth.

Penang is a unique example of government marrying its job creation policy objectives with emerging opportunities for international specialization by linking its economy to global production networks. The state government not only attracted foreign investors, but also helped them become deeply rooted in the economy through a well-designed investment promotion strategy including FTZ status, infrastructure development, skills development and vocational training, and forging links between local and foreign firms.

It is hazardous to make sweeping generalization from a single case study. However, the experience of Penang

does offer a number of policy insights that may be useful to policymakers in other countries in designing foreign direct investment (FDI) policy, especially in the context of the ongoing process of global production sharing.

Institutional reforms

The policy reforms began by forming a new statutory body, PDC as the principal development agency independent of the formal government structure. The carefully designed autonomous organizational structure enabled PDC to effectively perform its role as the centre point of formulating, implementing and coordinating the export-oriented industrialization strategy. PDC was successful in creating in the business community an impression of a unified and cooperative team with a firm commitment to promoting FDI.

Focused investment promotion

After the failure of initial attempts at import-substitution industrialization, the state government of Penang made a clear and decisive policy shift to export-oriented industrialization, with the electronics industry – broadly defined to include both electronics and electrical goods – as the key focus of investment promotion. Once the import substitution projects proved to be commercial failures, they were swiftly abandoned, without trying to keep them alive through direct subsidies. The choice of electronics as the priority sector nicely matched Penang's source endowment and unfolding opportunities for international specialization.

The choice of electronics as the priority sector at the outset also helped in designing an investment promotion strategy with an industrial cluster focus. The cluster approach provided a viable setting for promoting MNE-SME linkages within the export hub. It also created a 'skill pool' which turned out to be the major attraction of Penang as an attractive location for MNEs in a wide range of industries with an electronics base.

Effective personal involvement from the top level of government

Chief Minister Lim Cong Eu played an active personal role in the process, sending a clear, consistent message to investors about development priorities. He chaired the State Planning and Development Committee, the apex policymaking body of PDC, and led investment missions to the major home countries of prospective investors. The long tenure of the Chief Minister and his top management team for over two decades helped to assure consistent policy and built investor confidence.

Post-investment care

PDC created an institutional mechanism to maintain close links with both MNE affiliates and local firms operating in Penang. This helped policymakers stay- abreast of investor requirements and thus continuously adapt to the changing investment climate. More importantly, this receptivity

approach helped to engage the foreign firms already operating in Penang in the investment promotion campaign. PDC often used references from these firms to confirm the government's commitment to investment promotion.

Infrastructure development

PDC effectively used FTZs and industrial estates as the vehicles for focused infrastructure development for successful global integration of the Penang economy. It successfully addressed the problem of land scarcity faced in accommodating foreign investors by creating an innovative land bank through market acquisition of private land and reclamation.

Vocational training and skill development

At the formative stage of the export hub, PDC played an important facilitating role in labour absorption by the newly established MNEs by conducting vocational training programmes. When skill shortages began to hamper the expansion of electronics industry by the late 1980s, PDC joined with MNEs to establish the PSDC. The federal government also helped skill development at the firm level by offering general tax deductions on MNEs' contributions to PSDC schemes and their own skill development efforts.

Fostering MNE-local firm links

From the inception, PDC placed emphasis on developing a domestic supplier network around the branch plants of MNEs. This helped increase the economic impact of MNE presence on the domestic economy through a multiplier effect and was instrumental in anchoring foreign investors in the export hub through tighter and more appropriate supplier relationships. The domestic vendor networks that initially evolved around semiconductor assembly facilitated the subsequent diversification of the production base of the export hub into other product lines such as consumer electronics and computer peripherals, and more recently to LEDs and medical devices.

ANNEX: SOURCES AND METHODOLOGY

This study uses information from three main sources:

- Documents from Penang Development Corporation (PDC), the Penang state government organization responsible for investment promotion and public-private partnership implementation, Invest Penang, the investment promotion arm of PDC, and the Penang state government.
- Interviews with senior officials of government and private sector economic facilitator organizations, senior managers of major MNE affiliates, and representatives of chambers of commerce and industry (see annex).
- Firm-level information extracted from the unpublished returns to the Penang Industry Survey 2007 conducted by the Socio-Economic and Environmental Research Institute (SERI), Penang, and the Census of Manufacturing Industries 2005, conducted by the Malaysian Department of Statistics.

The names are listed alphabetically by family name. Interviews were conducted 29 November to 23 December 2010.

- **Cheah Eng Kooi**, Senior Branch Manager, Federation of Malaysian Manufacturers.
- **Goh Ban Lee**, Senior Research Fellow, Socio-Economic and Environmental Research Institute (SERI).
- **K. Gopalan**, Vice President, Kazanah Research and Investment Strategy.
- **O. K. Lee**, Managing Director, Toray Industries (Malaysia) Sdn Bhd, and Chairman, Federation of Malaysian Manufacturer.
- **Leong Yueh Kwong**, Director, SERI.
- **Kelvin Lew**, President, Mini-Circuit Technologies (Malaysia) Snd Bhd.
- **Khoo Cheok Sin**, Vice Chairman, Federation of Malaysian Manufacturers.
- **Seng Khoon**, Engineer, Design Automation, Altera Corporation.
- **Liew Chin Tong**, Member of Parliament for Bukit Bendera and Director, SERI.
- **Lim Mah Hui**, Visiting Research Fellow, SER.
- **Lim Po Li**, Director, Total Research and Consultancy Sdn Bhd, formerly Manager, Strategic Planning and Research, Penang Development Corporation.
- **Lim Teck Yunn**, Manager, Front-end & ASIC Design Automation, Altera Corporation Sdn Bhd.
- **Lim Wei Seong**, General Manager, SERI.
- **Loo Chen Chin**, Corporate Affairs Manager, Intel Corporation.
- **Loo Lee Lin**, General Manager, Invest Penang.
- **Hamdan Abdul Majeed**, Senior Vice President, Kazanah Research and Investment Strategy.
- **Suresh Narayanan**, Professor of Economics, Universiti Sains Malaysia.
- **Mohd Sofi Osman**, Managing Director, Advanced Micro Devices Export Sdn Bhd, and Chairman, Penang Skill Development Centre.
- **Phan Li Hsia**, Executive, Events and Communication, Invest Penang.
- **S. Pitchaiappan**, Managing Director, Syarikat Kilang Rempa Jaya Sakti, Snd. Bhd.
- **Chet Singh**, Founding General Manager of Penang Development Corporation.
- **Wong Sean Hai**, Malaysian American Electronics Association, and formerly CEO, Intel Malaysia.
- **Noorazleen Binti Suhaimi**, Investment Promotion Executive, Invest Penang.
- **Toh Kin Woon**, Senior Research Fellow, SERI.
- **Yoon Chon Leong**, former Vice President of Agelant.
- **Mark Yeoh**, Chief Engineer, Altera Corporation.

ENDNOTES

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CHAPTER V

CREATING INTEGRATED TEXTILE PARKS IN INDIA

PUBLIC-PRIVATE PARTNERSHIPS DRIVE WORLD- CLASS FACILITIES

CASE STUDY EXECUTIVE SUMMARY 92

MARKET TRENDS 92

ESSENTIALS FOR INTEGRATED TEXTILE PARKS 95

POCHAMPALLY HANDLOOM PARK 97

BRANDIX INDIA APPAREL CITY 99

CONCLUSION 100

CREATING INTEGRATED TEXTILE PARKS IN INDIA

PUBLIC-PRIVATE PARTNERSHIPS DRIVE WORLD-CLASS FACILITIES

CASE STUDY EXECUTIVE SUMMARY

The textile and clothing industry is the second largest employer in India and a vital component of the nation's economy. In the middle of the last decade, industry growth was becoming sluggish and employment was declining.

Given the dwindling fortunes of the Indian textiles and clothing sector, modernization of the sector became imperative. In 2005, the Government of India introduced the Scheme for Integrated Textile Parks (SITP), designed to strengthen infrastructural facilities in potential textiles growth areas.

The concept of clustering related businesses for critical mass and efficiency is a well-known strategy, applied to export processing zones, industrial parks and informal associations of entrepreneurs in business corridors. What sets this Indian case apart?

- First, the financial model is innovative. It combines government subsidies, loans from financial institutions, and equity participation from the firms that benefit from the arrangement.
- Second, the pro-poor orientation is unique. The public-private partnership targets job creation that benefits women and poor communities. Tens of thousands of new jobs have already been created since the project began in 2005.
- Third, although the programme runs throughout 2012, it is already being reviewed as a replicable model, both in India and elsewhere.

The clusters set up under the SITP are notable because both public and private actors worked together to provide world-class facilities for the textiles sector. The initiative for developing the SITP came from the federal government. The roles of all participants were clearly spelled out and the public-private partnership produced the desired results.

The case study first examines the state of the Indian textile and clothing industry during the last decade. It then discusses

the elements of the public-private partnerships established under the SITP. Finally, it describes two integrated textile parks created under the SITP: Pochampally Handloom Park and Brandix India Apparel City (BIAC).

MARKET TRENDS

In 2008-2009, the Indian textiles and clothing industry generated sales of US\$ 55 billion, nearly one-third of which was sold in the domestic market. During the same period, the industry contributed nearly 2% of India's GDP.

Direct and indirect employment provided by the textiles and clothing industry has been estimated at 35 million and 55 million respectively,¹ which is nearly one-fifth of the total factory sector industrial work force. The industry is the second largest employer in the Indian economy after agriculture.

The output of textiles and clothing firms more than doubled in value in US dollar terms during the period 2000 to 2009. The economic downturn in 2008-2009 impacted on the industry – while output fell nominally, employment declined by over 10% (see table 25).

Production of textiles and clothing saw impressive gains until 2007 when growth momentum slowed (see figure 12). However, the number of factories increased only marginally between 2001 and 2006, and in 2007-2008 there was a 12% decline. This dip in the number of factories was accompanied by an even larger decline in total employment in the sector.

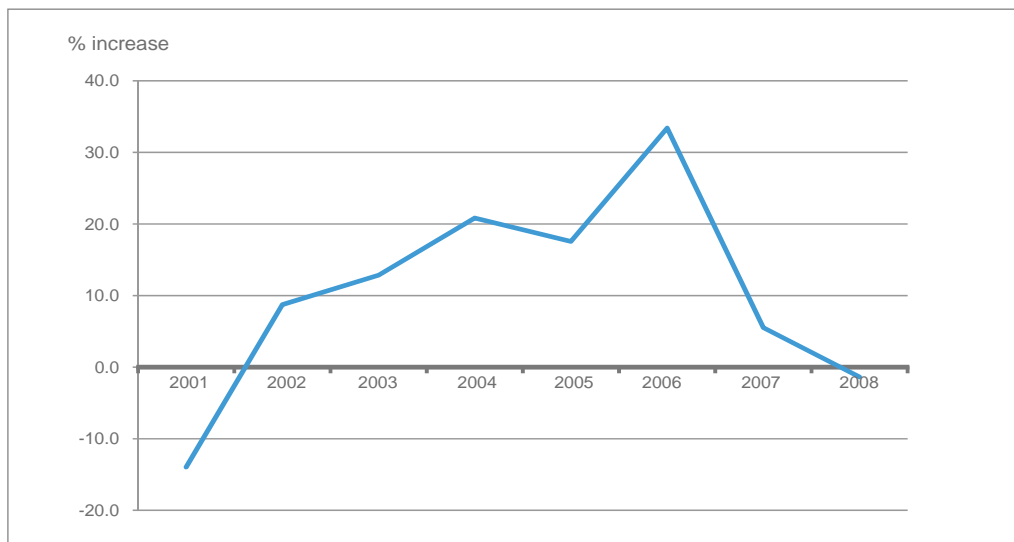
The performances of various segments of the sector diverge from the sector's overall performance. Yarn production increased only about 33% between 2000 and 2008 (see figure 13). Cloth production saw similar growth dynamics (see figure 14). In contrast, production of ready-made garments registered a consistently upward trend, with the exception of 2007-2008, when the economy turned down (see figure 15). Average annual growth rate for this segment was nearly 12% from 2001 to 2009.

Table 25: Scope of Indian textiles and clothing industry, 2000-2009

Year	Value of output (in US\$ millions)	Number of factories (in '000)	Total persons employed (in '000)
2000-2001	23 534.6	16.9	1 619.6
2001-2002	20 249.0	15.8	1 499.2
2002-2003	22 018.6	16.1	1 514.1
2003-2004	24 849.9	16.2	1 589.5
2004-2005	30 029.2	16.9	1 714.6
2005-2006	35 302.5	17.5	1 878.9
2006-2007	47 097.4	18.7	2 386.5
2007-2008	49 700.6	16.5	2 090.4
2008-2009	49 020.0	19.1	1 873.4

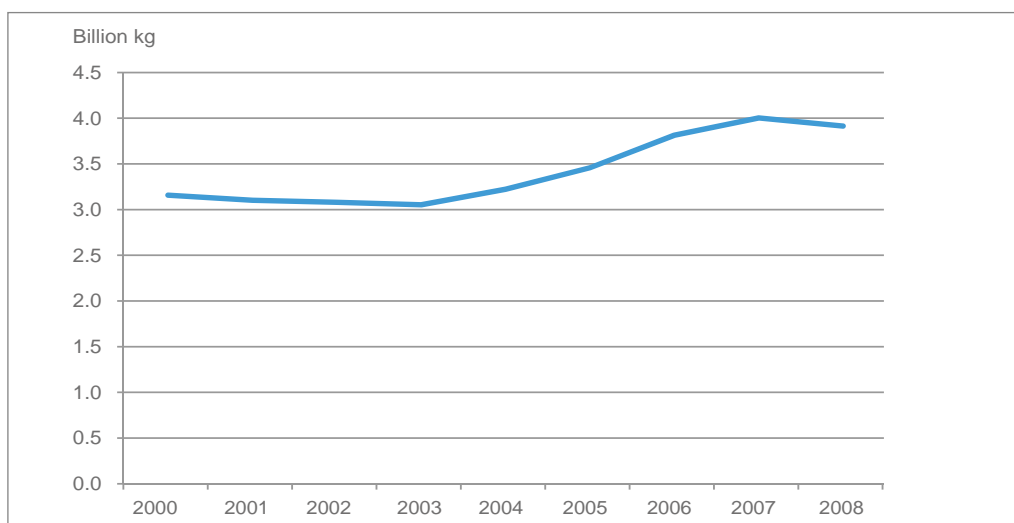
Source: Annual Survey of Industries.

Figure 12: Growth performance of textiles and clothing sector, 2001-2008



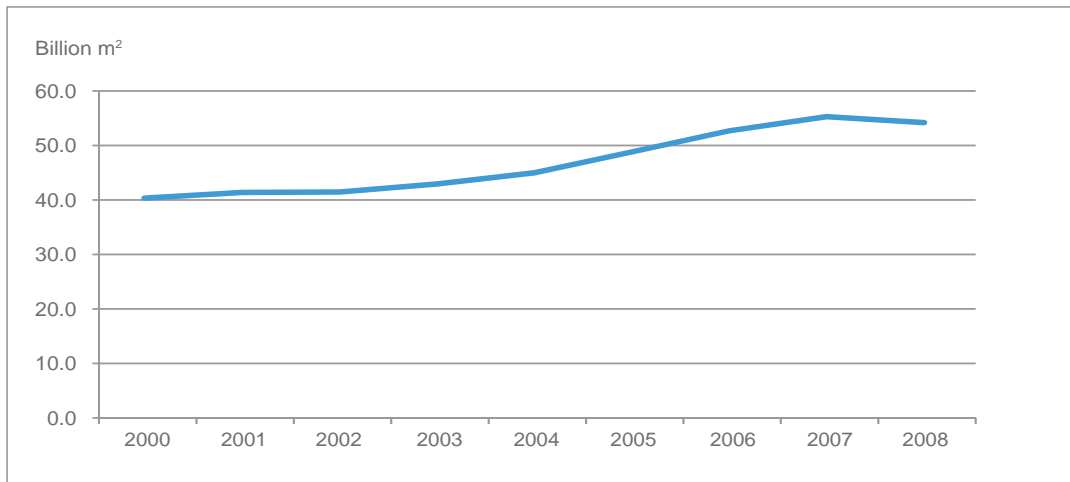
Source: Annual Survey of Industries.

Figure 13: Yarn production, 2000-2008



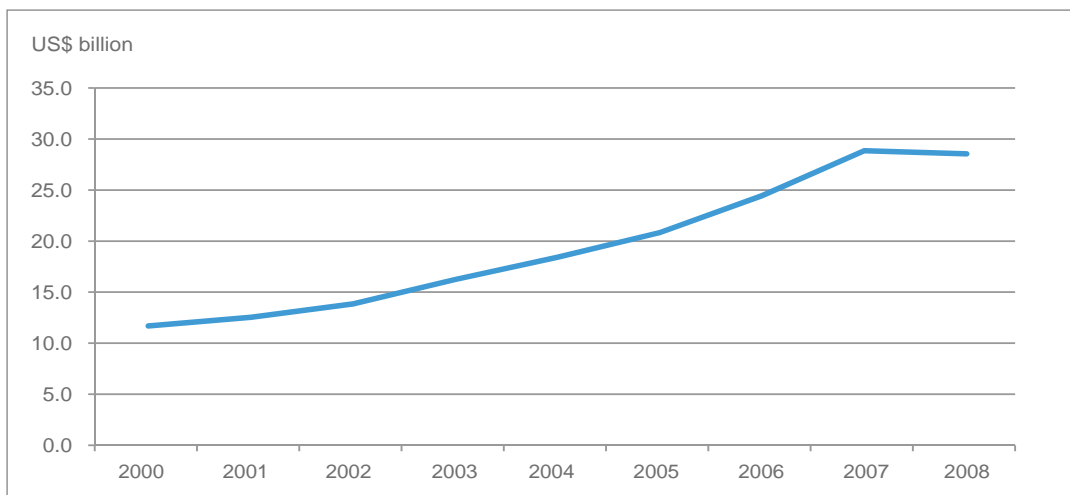
Source: Indiatat.

Figure 14: Cloth production, 2000-2008



Source: Indiastat.

Figure 15: Production of ready-made garments, 2000-2008



Source: Indiastat.

SLUGGISH GROWTH

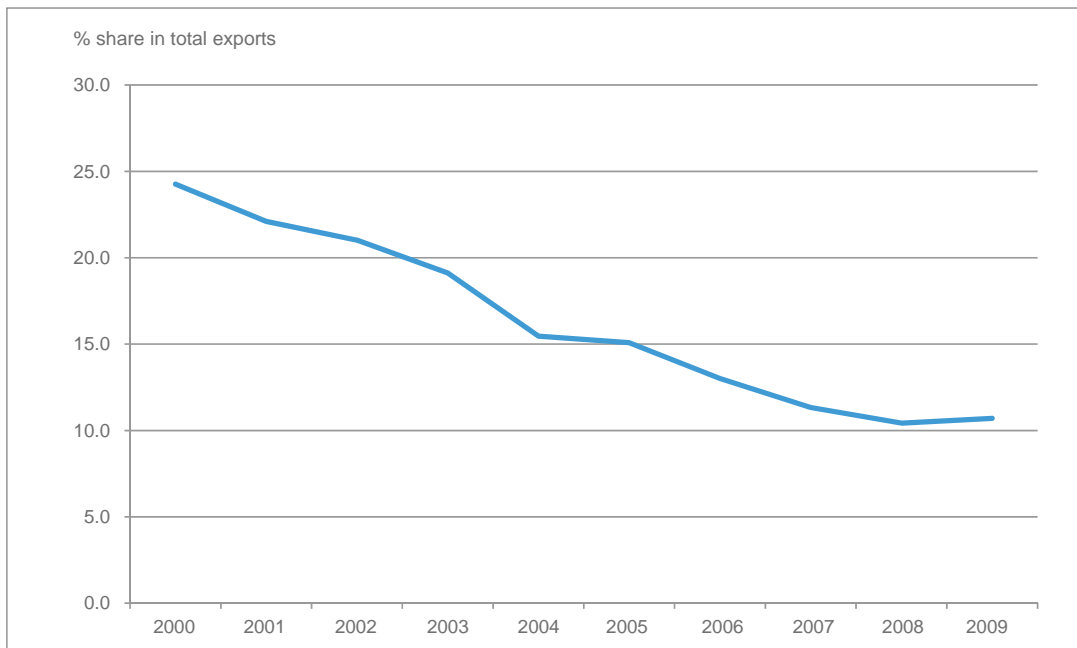
In recent years, textiles and clothing exports from India grew at a relatively sluggish rate of around 7%, while total exports were consistently registering double-digit growth rates. This trend was particularly visible from around 2005 when the WTO's Agreement on Textiles and Clothing (ATC) – also known as the Multifibre Arrangement (MFA) – was phased out, ending the decades old quota regime that influenced trade in this sector. Contrary to expectations that phasing out the ATC would stimulate India's textiles and clothing sector, exports from the sector lost momentum. After the phase out of the ATC in January 2005, there was an initial spurt in exports. However, this growth momentum was not maintained in subsequent years.

Decreased growth of exports of textiles and clothing from India in recent years resulted in a near stagnation in India's

global share in textiles and clothing trade. At the same time, major producers like China in both textiles and clothing and Bangladesh in the clothing sector have increased their market shares. However, India's indifferent performance has adversely affected its position as a major exporter of textiles and clothing.

More than half of textiles exports from India are ready-made garments. Exports from this segment declined about 15% by 2009, due to the end of the MFA, but have stabilized and again started to rise.

The share of textiles and clothing in India's total exports has declined sharply since 2000-2001 when the contribution of this sector was nearly 25% (see figure 16). In 2009-2010, the sector's share had declined to about 11%. Emergence of a few fast-growing export sectors resulted in the relative decline in the importance of the textiles sector.

Figure 16: Share of textiles and clothing in India's total exports, 2000-2009

Source: Directorate General of Commercial Intelligence and Statistics, Ministry of Commerce, Government of India.

Underperformance of the Indian textiles and clothing sector during the last decade meant that the sector was unable to take advantage of the increased opportunities in global markets following the phasing out of the ATC in 2005. India's share in global exports of textiles and clothing stagnated, particularly since the end of the quota regime.

Given the dwindling fortunes of the sector, modernization became imperative. The Government believes the SITP is the right way forward. Its 11th Five Year Plan (2007-2012) envisages India securing a 7% share in the global textiles trade by 2012.

ESSENTIALS FOR INTEGRATED TEXTILE PARKS

In 2005, the Government launched the SITP. In 2008, it was extended an additional four years to 2012. The SITP aims to:

- Provide world-class infrastructure facilities for textile and clothing business units meeting international environmental and social standards;
- Create new textile parks of international standards at potential growth centres by engaging a panel of professional agencies for project identification and execution.

The SITP targets industrial clusters and locations with high growth potential that require strategic interventions to improve their competitiveness. Project costs cover common infrastructure and buildings for production and other support activities, including textiles engineering, accessories and

packaging needed by each ITP. Developers of ITPs have the flexibility to suit local requirements.

ITPs can comprise either the full value chain of textiles or separate textile products. They are implemented through public-private partnerships with industry associations or groups of entrepreneurs as the main promoters. This model was adopted to attract large domestic and foreign investments in textile clusters. Federal and state governments and agencies provide the enabling environment. To implement the projects, a panel of professional managers selected by the Ministry of Textiles is entrusted with the task of identifying locations and setting up the facilities.

When the SITP was adopted in 2005, the Government expected that 25 ITPs would be established in the first two years. Every ITP would normally have 50 business units with a total estimated investment of INR 7.5 billion. The number of entrepreneurs and the investments they could make in each ITP could vary between projects. However, the aggregate investment by the entrepreneurs in land, buildings, plant and machinery in an ITP must be at least twice the cost of common infrastructure proposed for the park.

An assessment made by the Government in 2010 showed that the ITPs had attracted investment of INR 35 billion and had generated employment for 15,000 workers. Of the 40 ITPs for which information is available, the number of entrepreneurs participating has varied from as few as seven to 171. The BIAC has only 17 entrepreneurs involved, although the venture is the largest in terms of the land it occupies. The average number of entrepreneurs is around 55 per park.

Over the past several years, the Government has actively established special economic zones (SEZs). SEZs are export clusters that provide infrastructure and other facilities comparable to international best practices. ITPs can be set up in the SEZs. The essential elements of the textile clusters are discussed below.

FINANCING

Project costs are covered through a mix of equity or grants from federal and state governments; industrial development corporations established by state governments, industry and project management consultants; and loans from banks and other financial institutions.

Financial participation by the federal government in the form of grants or equity is limited to 40% of the infrastructure cost, subject to a cap of INR 400 million. The private sector raises the remaining 60% of the resources needed to finance infrastructure costs. Private sector participants are the majority stakeholders because governments and their agencies cannot hold equity stakes exceeding 49% of risk capital.

Public and private sector participants make their financial contributions simultaneously. The Government releases its grant in stages, synchronized with contributions by the private sector. The private sector is able to raise resources from banks and other financial institutions that recognize value in the concept of common infrastructure and the positive impact on profitability of units participating in the ITPs.

The financial contribution made by the governments for developing infrastructure, 40% of the total cost, increases the competitiveness of the business units in the parks, which enables them to better service debt.

Banks see the potential for large numbers of SMEs in one location. Banks have provided a 'single product, single window' type of approval for units located in a park, thus enabling faster loan processing.

Private-sector entities are the majority partners and owners of the assets of the parks. Responsibility for maintaining the infrastructure rests with the private entrepreneurs who participate in the parks. The resources needed for maintenance are collected in the form of user charges, which are in proportion to the land and built-up space occupied by the members. The principle of equity guides the user charges, that is, the larger units contribute more for the upkeep of the infrastructure of the parks. Charges for water, electricity and effluent treatment are collected on the basis of usage independent of the area occupied or the size of the unit.

SHARED INFRASTRUCTURE, FACILITIES AND COSTS

The ITPs are based on the concept of agglomeration; participating units take advantage of common infrastructure facilities. In addition to land accommodating a large number of units, common infrastructure includes compound walls, roads, drainage and water supply, electricity supply including captive power plants, effluent treatment and telecommunication facilities.

The parks also have common testing laboratories, equipment, design centres trade and display centres, warehouse facilities, raw material depots, packaging units, crèches, canteens, workers' hostels, offices of service providers, labour rest areas, recreation facilities and marketing support systems.

The parks have common training centres with equipment. Training courses provide skilled labour to the business units in the park. The parks may charge trainees a nominal fee for the training.

SMEs located in the ITPs benefit from common infrastructure. They can reduce costs by eliminating the need to set up individual facilities that are essential for international markets, such as testing laboratories. The proliferation of technical standards in major markets creates formidable challenges for manufacturers in developing countries as their products and processes often must meet these standards in markets where margins are wafer thin. Sharing costs to meet global standards benefits SMEs.

IMPLEMENTATION THROUGH PUBLIC-PRIVATE PARTNERSHIPS

The principal promoters of ITPs are industry associations or groups of entrepreneurs. The parks are developed through public-private partnerships (PPPs) with substantial government involvement at both federal and the sub-federal levels. The partnerships are implemented through Special Purpose Vehicles (SPV) formed with the representatives of local Industry, financial institutions, state and federal governments and a corporate body registered under the Companies Act, 1956.

SPVs are legal entities created to fulfil limited objectives. SPVs are typically used by enterprises to isolate themselves from financial risk. An enterprise will transfer assets to an SPV for management or use the SPV to finance a large project with a narrow set of goals without putting the entire enterprise at risk. SPVs are also commonly used in complex financing to separate different layers of equity investment.

SPVs have operational autonomy and therefore can address all issues essential for the effective functioning of the ITPs. Operational autonomy ensures that the SPVs do not suffer from institutional limitations that can affect the performance

of public sector enterprises. SPVs implement the ITPs. Their responsibilities include the following:

- Conceptualizing, formulating, and achieving financial closure;
- Implementing and managing the infrastructure;
- Procuring land, the cost of which is built into the project cost;
- After developing the infrastructure, allocate sites for business units;
- Facilitating securing bank finance required by the business units;
- Maintaining the utilities and infrastructure by collecting service and user charges;
- Remaining self-sustaining with a positive revenue stream;
- Appointing contractors and consultants in a fair and transparent manner;
- Ensuring timely completion of the projects by obtaining appropriate performance guarantees from consultants and contractors.

PROJECT MANAGEMENT

After an ITP project is conceived, the Indian Ministry of Textiles appoints a project management consultant, who is responsible for promptly implementing the project with a high degree of quality at a low cost acceptable to the members of the SPV. The Ministry of Textiles supervises the projects and monitors progress. Project management consultants are responsible for:

- Identifying locations for the ITPs based on an assessment of the demand and potential of the area;
- Facilitating the formation of SPVs with the participation of local industry;
- Preparing project plans, including standards for infrastructure;
- Developing project plans and submitting them to Project Approval Committees (PAC);
- Assisting the SPVs in selecting agencies to prepare bid documents, as well as constructing, operating and maintaining the facilities;
- Assisting the SPV in achieving financial closure;²
- Monitoring implementation and submitting periodical progress reports to the Ministry of Textiles;
- Liaising with state governments to resolve state-related problems;
- Ensuring timely completion of projects as directed by the PAC.

ADMINISTRATIVE MECHANISMS

Projects submitted by project management consultants are considered by the Project Scrutiny Committee (PSC), which is comprised of senior officials of the Ministry of Textiles, the Ministry of Finance, the Planning Commission, the Department of Commerce, the Department of Industrial Policy and Promotion, the Ministry of Environment and Forests, and the Textile Commissioner.

The PSC appraises the proposals submitted by project management consultants for project components, viability, feasibility and timelines. The PSC considers the utility of the projects in terms of modernization and integration of supply and management chains, and makes the final recommendations to the PAC.

The PAC, which is headed by the Minister of Textiles and includes two senior Ministry officials, considers the recommendations of Project Scrutiny Committee and gives final approval to a project. The Ministry of Textiles periodically reviews the progress of projects under the SITP. Project management consultants are responsible for devising suitable monitoring and evaluation systems.

THE ROLE OF STATE GOVERNMENTS

State governments play an important role in developing ITPs. India's state governments are interested in becoming partners because ITPs foster economic development and employment. State governments perform the following tasks:

- Provide requisite clearances for setting up ITPs and necessary assistance for power, water and other utilities;
- Assist in identifying and procuring suitable land;
- Participate in the projects by subscribing to the equity of SPVs or by providing grants;
- Provide flexible and conducive labour environment and special facilities like tax exemptions for the units in ITPs;
- Integrate ITPs with other industrial development schemes for overall effectiveness and efficiency of the projects.

POCHAMPALLY HANDLOOM PARK

Pochampally Handloom Park is an ITP developed to preserve, improve and market the traditionally rich, high quality and valuable products produced by this natural handloom-weaving cluster, which is one of India's most popular traditional silk weaving centres.

The park, which was approved by the Ministry of Textiles in 2006 and became operational towards the end of 2008,

was created to address major constraints faced by the Pochampally handloom producers, including:

- Largely disorganized, dispersed and decentralized activities;
- Non-conformity to quality standards, a lack of branding of handloom products and a lack of promotional initiatives;
- A traditional mode of production with low technology and a conventional product range;
- Low productivity;
- Inadequate working capital;
- Weak marketing links and untapped foreign markets, resulting in stagnation of production and sales;
- Competition from the power-loom and mill sector.

Addressing these constraints was expected to unlock the production potential and help producers move up the value chain.

Pochampally textiles are woven by using a tie-dye technique, popularly known as 'Ikat'. Pochampally textiles are one of the first handloom weaving products to have received a Geographical Indication Certificate.

Pochampally Handloom Park has six unified common clusters that combine several activities, including handloom weaving including yarn processing, dyeing and preparation. Located 60 kilometres from Hyderabad, the capital of the state of Andhra Pradesh, the park covers 23 acres. The park has been equipped to provide strong backward and forward linkages for planned and sustained development that will provide employment to the weavers in the region. The park is expected to provide additional employment opportunities and venture into diversified products in domestic and international markets.

The total project cost of Pochampally Handloom Park was estimated at INR 340 million. The investment in the park was estimated at nearly INR 476 million, with annual turnover of around INR 350 million.

Approved by the Ministry of Textiles in 2006, the Pochampally Handloom Park was implemented through an SPV, Pochampally Handloom Park Limited (PHPL). The Ministry of Textiles appointed Infrastructure Leasing & Financial Services, one of India's leading infrastructure development and finance companies, as the project management consultant to oversee the execution of the Pochampally Handloom Park. The progress and the execution of the project was the responsibility of PHPL's Board of Directors.

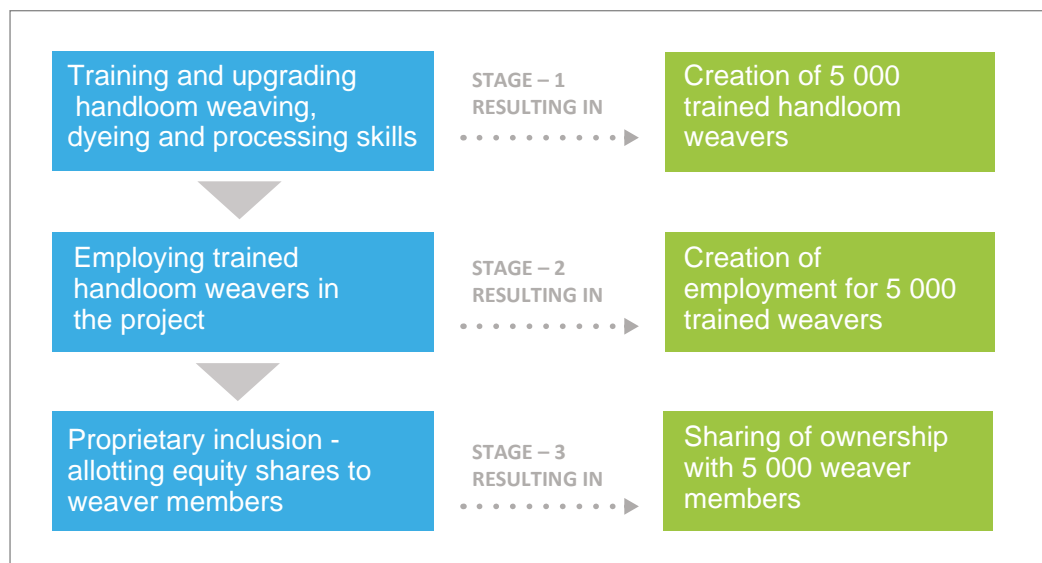
In addition to the master weavers who are both promoters and directors of the project, PHPL's Board of Directors includes nominee directors from the Ministry of Textiles, Government of India, New Delhi; the Department of Handlooms & Textiles, Government of Andhra Pradesh; and Infrastructure Leasing & Financial Services, Mumbai.

MORE PROFITS FOR PRODUCERS

The principal objective of this project is to ensure that modern infrastructure improves the skills of the handloom weavers in Pochampally and enables them to produce trendy, quality products at reasonable prices. Improving product quality is key to increasing exports, thus making the producers more economically viable.

The state-of-the-art Pochampally Handloom Park was designed to facilitate production of high-end products meeting international quality standards that can sustainably penetrate international markets. To meet the park's objectives, the producers must do several things, including:

Figure 17: Job creation - Pochampally's three-stage strategy



Source: IL&FS.

Box 11: Pochampally Handloom Park – accomplishments

Pochampally Handloom Park is well on its way as a model for pro-poor export-led growth. The public-private sector collaboration has been fruitful.

Modernized production. Thanks to the public-private infrastructure investment model, the park has helped businesses improve production by mechanizing pre-weaving, upgrading weaving technology and modernizing dyeing techniques and handlooms.

Pro-poor training programmes in surrounding communities. Poor communities in villages surrounding the park have upgraded their skills through training. Women have been a focus of the training programmes. Public awareness workshops have also been held to disseminate the park concept and publicize the need for upgraded skills. This has led to a growth in enrollment by artisans.

Stronger marketing. By grouping the efforts of firms for critical mass, stronger marketing has been possible. Vendors' meetings have been held at the National Handloom Development Corporation and the Karnataka Silk Marketing Board. These have led to:

- A contract with one of Asia's leading designers to establish products in export markets;
- Participation in international trade fairs in Mumbai and Frankfurt, Germany;
- Launch of the 'Ikat Art' brand;
- Contracts with Reliance, Shoppers Stop and other chain stores in most of the major cities in India;
- An agreement with Infrastructure Leasing & Financial Services for marketing support in domestic and international markets.

- Flexibly diversify products and continuously innovate towards custom-made designs for foreign markets, as well as produce on time and in volume;
- Upgrade technology to develop low-cost and efficient handlooms;
- Obtain maximum cost-benefit ratios through effective operations and management systems;
- Strengthen all aspects of the business, including market information, raw material supply, design, merchandizing, market development, production, inventory management and the entire supply chain.

The park's promoters adopted a participatory business model making about 5,000 handloom weavers stakeholders through allotment of equity shares. Including the handloom weavers as stakeholders was considered important for creating new job opportunities. As the weavers participated in decision-making, they created systems for regular training and skill development. New skills enabled the weavers to sustain and strengthen their traditional knowledge and skills. New skills also improved the employability of the weaver-artisans.

STRATEGIES FOR SUCCESS

Pochampally Handloom Park adopted a three-stage strategy (see figure 17) for job creation and economic growth.

This model seeks to provide the handloom weavers with sustainable livelihoods. In the first stage, the weavers are given the necessary training. Once appropriately trained, the weavers are employed in the park. Finally, the weavers receive an ownership interest in the SPV.

The SPV contracted with Infrastructure Leasing & Financial Services to provide domestic and international marketing support. The SPV is also working to modernize the weaving equipment and to market the products in Indian and export markets through participating in trade fairs in India and abroad. To increase the visibility of products, the SPV launched a new brand – 'Ikat Art'.

BRANDIX INDIA APPAREL CITY

Brandix India Apparel City (BIAC), a 1,000 acre integrated textile and apparel park, is a SEZ. The park, which opened in May 2010, is located at Achutapuram-Rambilli Mandals, about 50 kilometres south of Visakhapatnam in Andhra Pradesh.

BIAC was developed with the active support of the state government of Andhra Pradesh. It aims to bring large-scale employment opportunities to rural people, mostly women, in a nascent, but strategically important apparel exports segment. The park leverages Andhra's availability of raw cotton, abundant water from the Godavari River, power availability and access to a container port. The Government of India extended financial support under its STIP.

The state government actively involved Brandix Lanka, Sri Lanka's largest integrated apparel exporter, to conceive and manage BIAC. Other global apparel supply chain partners supporting this venture are Brandot, United States; Pioneer Elastics, Hong Kong SAR; CMT, Mauritius; and Quantum Clothing, United Kingdom.

A FOREIGN DIRECT INVESTMENT SHOWCASE

BIAC has become an important example of successful foreign investment in a sector with high growth potential. The project attracted finance from Sri Lanka and has become a showcase for investment cooperation between India and its South Asian partners. Through this project, Brandix Lanka has organized a consortium of firms leveraging on its strong presence in Sri Lanka.

Established in the early 1980s, Brandix Lanka employs over 25,000 people in more than 27 manufacturing facilities in Sri Lanka and its strategically located international sourcing offices. Brandix's business model encompasses vertical integration and specialization in key product categories in both woven and knit apparel. Backward integration into both woven and knit fabrics complements its product specialization in trims and washing/finishing, thus enabling Brandix to provide a unique total solution to its global branded clothing retailers.

BIAC is based on the fibre-to-store concept, underpinned by scale advantages and strong apparel business fundamentals. It seeks to leverage global expertise offering total solutions within its 1,000 acre park – a first in South Asia and perhaps in the world, thus advancing BIAC's vision to be the 'preferred global sourcing hub for apparel'.

To achieve its vision, BIAC has created a vertically integrated apparel value chain ready to support large-scale spinning, knitting, garmenting, finishing, printing, embellishments and packaging. Its operations are supported by the park's centralized infrastructure and common services and facilities.

GOVERNMENT INFRASTRUCTURE

The state government has created the much-needed external infrastructure critical for an integrated park of this size to succeed. It constructed a 200 MW substation with two feeders from three separate grid-sources for reliable power supply. Water connections have been provided. BIAC has assured supplies of 60 million litres per day of raw water through a 26 kilometre long, 1,000 millimetre diameter pipeline from pumping stations at Parvada supplying Godavari river water to the city of Vizag. To sustain this kind of water supply the Government is setting up a 4,000 million litre capacity summer reservoir.

Transportation is a huge issue in developing countries such as India when large-scale projects are built near large cities. The state government has built a four-lane road network four kilometres long from Atchutapuram Junction to BIAC. A nine-kilometre connection to national highways in the vicinity is planned.

PARK INFRASTRUCTURE

BIAC, an SPV, operates the park and has built the internal infrastructure. The project is a Special Economic Zone and large investments have been made. Security is provided by a 9.5 kilometre perimeter boundary wall coupled with 7.2 kilometres of inner security patrol roads suitable for containers with avenue walkways and storm water drains.

The park has a 33 KW power distribution system, street lighting and perimeter security lights. Because the water from the state government is untreated, BIAC is constructing a 60 million litres per day water treatment facility, of which 20 million litres per day has been commissioned. BIAC has also constructed a rainwater-harvesting pond as an integral part of its commitment to environmental sustainability. Other infrastructure includes a 56 million litres per day effluent treatment facility, 250 million litres per day guard ponds or reservoirs for the collection of effluents, a 9 kilometre pipeline to carry treated effluent and a facility for solid waste management.

BIAC has constructed a 35,000 square foot factory complex, a 3,500 square foot fire services centre and a 6,000 square foot main reception entrance for park security, logistics support and customs services. A 155,000 square foot centralized services complex encompassing commercial services and administrative buildings, a restaurant, a food court, and residences (including hostels) have been built. For strong connectivity with global markets, BIAC provides voice, data connectivity and WiMax facilities for business units in the complex.

CONCLUSION

Large-scale industrial parks are best achieved through a joint venture of government clusters that have financial stake in the clusters. This public-private partnership model proved sustainable because responsibility for maintaining common facilities rests with the enterprises themselves through the payment of user charges.

A REPLICABLE MODEL

The clusters set up under the SITP are noteworthy because both public and private actors worked together to provide world-class facilities for the textiles sector. The initiative for developing the SITP came from the federal government. The roles of all participants were clearly spelled out and the public-private partnership produced the desired results.

The basic steps for replicating this model are as follows.

- The central government creates the initial plan for developing the textile parks with clear policies for implementation and funding.

- The central government identifies a project management consultant to execute the project under the Government's supervision with clear terms of reference.
- State or provincial governments should be fully involved because their residents will be the main beneficiaries. State or provincial governments should invest in developing the land and improving transportation connectivity.
- Involve private sector companies that are investing in the project and the artisans as partners. This will then ensure active participation in lawmaking, enforcement and commercial in the park.
- Connect the park to global markets to drive expansion.

India's integrated textile parks have only been in operation for a few years. However, given the response from industry and governments participating in these ventures, the sustainability of the parks look certain.

ENDNOTES

1. Information obtained from Confederation of Indian Textile Industry (CITI).
2. Financial closure is defined as the existence of a legally binding commitment of equity holders or debt financiers to provide or mobilize funding for the project. Source: World Bank.



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United Nations Sales No. E.11.III.T.2

USD 50
ISBN 978-92-9137-393-2

