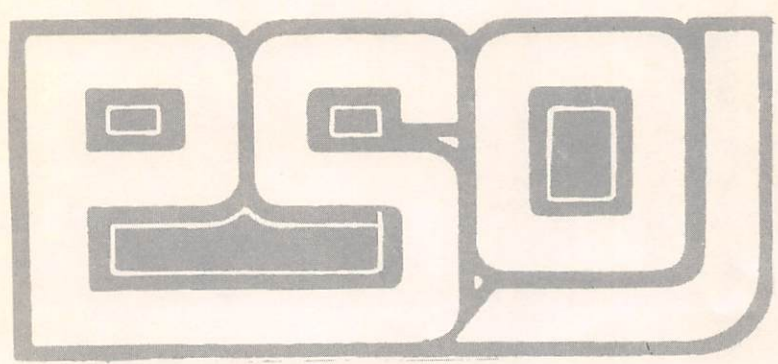


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# 1993

**PSOJ/USAID  
BUSINESS BEHAVIOUR  
SURVEY  
OF JAMAICAN FIRMS**

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**Analysis and Report Presentation**

Robert Chambers, Ph.D. (NAP)

**Management of Field Survey**

Glenford Millin (PSOJ)

Published November 1993 by  
The Private Sector Organisation of Jamaica

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Kingston 10

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Fax: (809) 92-75137

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# INTRODUCING THE NATIONAL ACTION PLAN

The **National Action Plan (NAP)** is a joint initiative between the Jamaican Private Sector, represented by the Private Sector Organisation of Jamaica (PSOJ), and the Government of Jamaica (GOJ), both working in Cooperative Agreement with USAID towards the objective of enhancing the overall climate for domestic and foreign private investment, particularly by identifying and systematically eliminating constraints to such investments.

First among the joint actions to be undertaken under the Plan was the definition of a set of **Critical Success Factors (CSFs)** which, if applied, would guide the divestment by Government of those functions which could more effectively be handled by the private sector, thereby freeing GOJ to focus scarce resources on those functions which must remain in the public sector. Overlaps would be eliminated to the extent possible, and all activities would be closely coordinated with the Fiscal Policy Unit of the Ministry of Finance, in order to ensure the phase-out of GOJ expenditures which did not support the CSFs.

The NAP also encompasses actions to reduce red-tape in respect of local and foreign investment, and day-to-day importing, exporting and general business transactions. Transfers of titles, settlement of stock exchange trades, movement of goods on and off vessels and many other business activities are subject to procedural delays which adversely impact productivity and competitiveness. NAP will, after systematic identification, examine the rationale for the existence of these procedures in light of the CSFs mentioned above, and prepare and implement a timetable for abolishing/modifying procedures or applying technology.

Other environmental factors affecting the investment climate for which analysis and studies are underway include, but are not limited to customs reform, improving law enforcement and the justice system, improving the foreign exchange market, and streamlining the bureaucracy. Also envisaged is the development of an Inventory of Investments and a System for recording investment.

The Business Behaviour Survey was financed by the National Action Plan as part of the ongoing process of information gathering which forms the basis of NAP's policy recommendations to the Government on economic reform.

In order to implement the NAP, the PSOJ, the GOJ and USAID agreed to establish a Secretariat, which would report and be accountable to the Steering Committee of the

Plan. The structure of the Steering Committee is as follows: Minister of Finance, Minister of Industry, Tourism and Commerce, Opposition representative, President of the PSOJ, immediate Past President of the PSOJ, the Head of Mission, USAID – Kingston and the Executive Director of the NAP Secretariat.

In addition to its Executive Director, the Secretariat team includes a Consultant Economist and a Sectoral Advisor:

➤ **Executive Director:**      ***Frank A. Lopez***

Corporate Director (Technical Planning), Alcan Jamaica Company, Seconded to GOJ in 1992 as Director, Government Restructuring. With an academic background in engineering, Mr. Lopez has substantial experience at Alcan with the production, maintenance, and project functions, culminating with management responsibility for Alcan's Ewarton operations.

➤ **Consultant Economist:**      ***Robert L. Chambers, Ph.D.***

Dr. Chambers combines an undergraduate degree **magna cum laude** in chemical engineering from Howard University, with a finance MBA and a doctorate in economics (specializing in international trade) from the University of Houston. His professional experience includes work with Union Carbide as process design engineer, a stint as business development manager with a Dow Chemicals/British Oxygen joint venture and a lectureship in economics at the University of Houston.

➤ **Advisor, Trade and  
Investment Process**

***Jennifer Owen-Williams***

Educated at UWI and the London School of Economics, Mrs. Owen-Williams has represented GOJ overseas in the renegotiation of the ACP-EEC Convention of Lome, as Jamaica Trade Commissioner in Canada and in the renegotiations of the CARIBCAN Agreement. Her professional experience includes 12 years with the Jamaica National Export Corporation and JAMPRO.

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# FOREWORD

by

**Hon. Dennis Lalor**

Publication of this PSOJ/USAID Business Behaviour Report is a significant move towards ensuring wider acceptance of the need for liberalization of the Jamaican economy.

As President of the PSOJ during 1990–1992, I enjoyed the privilege of being involved in the effort, and I remain convinced that notwithstanding the skeptics in our midst, the decision by the Government to liberalize not only exchange control but the economy generally will prove to be immensely beneficial.

I am unconvinced by the indignation whipped up on the topic of the Government's attempts to deregulate the economy, because it is abundantly clear that the pain we are experiencing is as a result of too many years of centralized economic decision-making which served inter alia to create a stifling web of controls over trade and production.

The results of deregulation, noted in this report, prove the nay sayers wrong. It disproves the pessimistic view of doom and gloom, riding on the heels of deregulation, divestment and liberalization.

The reiterated lesson of successful reform, is that there will be gainers and losers.

I predict, and the report indicates, there will be more gainers than losers. But there remains a great deal more work to be done.

The economy faces a hard slog to escape from its present dilemma, and all the stakeholders in Jamaican business, including the Government, have to work together to develop a strategy which will push the economy at a faster rate than has been possible up to now.

To a great extent, the Jamaican Economy is being bolstered by the remarkable faith of the ordinary people of this country.

To those who can only see the difficulties and not the achievements and opportunities, I would enjoin you to emulate those ordinary people, as any significant improvement for business will depend primarily on whether we believe in ourselves and whether we truly believe that the market system is best for us.

Free markets and prices are not an economic system, but the natural state of things, governed by laws of supply and demand as basic as those of weather and physics, and no more moral or immoral than the tides.

And contrary to what some people would have us think, there are no quick fixes. It is up to companies to believe in their ability to compete with the rest of the world, and this belief has to be reflected in increased investment in state-of-the-art technology, high levels of productivity, and a willingness to take risks.

We are now beginning to see a light at the end of the tunnel.

Since deregulation and liberalization, new investments have been coming onstream.

The process of recovery has begun. Government has taken many commendable steps in the right direction.

It is up to us to provide the support and leadership to create the most productive economic system in our history.

# 1. EXECUTIVE SUMMARY

This Business Behaviour Survey was commissioned by USAID and was administered and conducted by the P.S.O.J. A total of 250 firms were surveyed from ten industries (See Figure 1A). The survey covered a range of topics from sales and investment performance to perceptions of problems facing businesses. The primary objective of the survey was to determine if liberalization has had a positive effect on businesses. The result is that liberalization seems to have benefitted businesses, and improved business confidence. This is underscored by the fact that for most classes of firms, except medium-sized firms, real average investments have increased since liberalization (small firms: 88.8%; medium-sized firms (43%); large firms: 21% - See figure 1C). Also, exports which includes tourism, have increased substantially since liberalization (excluding bauxite firms, exports of sampled firms rose from US\$636 million in 1991 to US\$806 million in 1992, and are projected to exceed US\$900 million in 1993).

The following summarizes the main results:

1. Investments, exports and, to a lesser extent profitability, have increased since liberalization. There appears to be a causal link between liberalization and these increases especially for small firms. However, rigorous statistical analysis was generally unable to confirm this for the other classes of firms, due to problems with the data (insufficiency, and a high degree of variability). Nevertheless, a strong case can be made for a causal link between liberalization and increased investments in the following industries: manufacturing (mainly garments); tourism (accommodations); and especially the financial sector.
2. Real domestic sales have declined since liberalization. Total Sales (exports and local) also declined since liberalization, but are recovering (see Fig. 1b).
3. Exports are expected to play an increasing role in the growth of companies between 1993 - 1994.
4. The biggest problem facing firms is the high rate of interest, with scarcity of foreign exchange, and government regulation surprisingly ranked much lower.
5. Despite the problem of high interest rates, real investment is on an upward trend. However, sales attributable to these investments are expected to be smaller in the domestic market in 1993/94 than in 1991/92 (perhaps due to declining real incomes). The picture is reversed in the

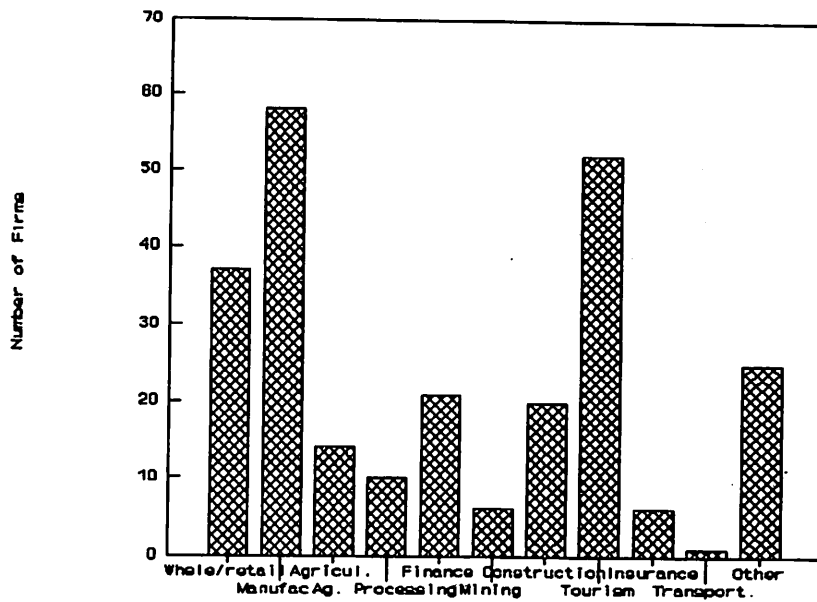
(perhaps due to declining real incomes). The picture is reversed in the export market, where incremental sales are expected to increase dramatically in 1993/94 over 1991/92<sup>1</sup>.

6. The major source of investment funds is from local Commercial Banks, and the major use of these funds is for capacity expansion within the same industrial segment.
7. Although the major use, or planned use, of investment funds is for capacity expansion (over 74%) for the entire time period studied (1991 - 1994), funds for mergers and acquisitions are expected to double in 1994 over those planned for 1993, accounting for over 16% of all investment funds. The message for the entire business community is that consolidation of business enterprises should significantly increase in 1994.

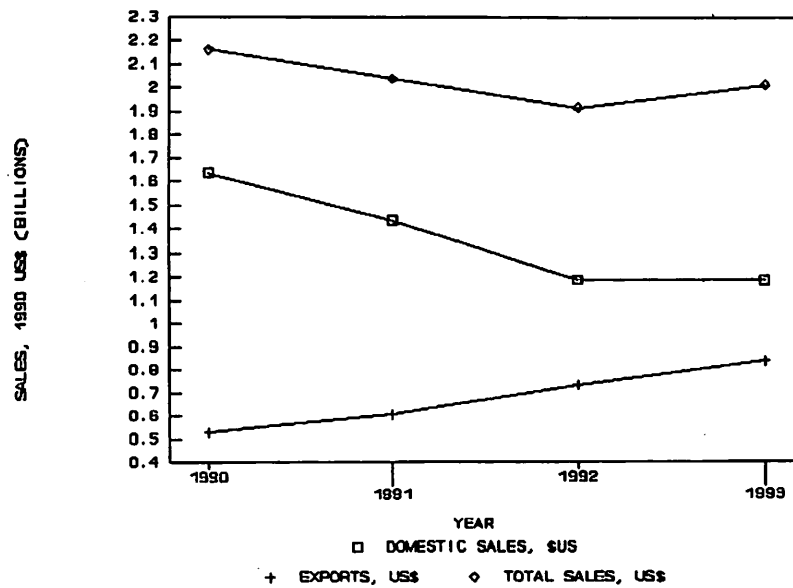
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<sup>1</sup>It is suspected that over-optimism regarding exports may be a factor in the bullish export forecasts, due to slow economic growth in the major export destinations.

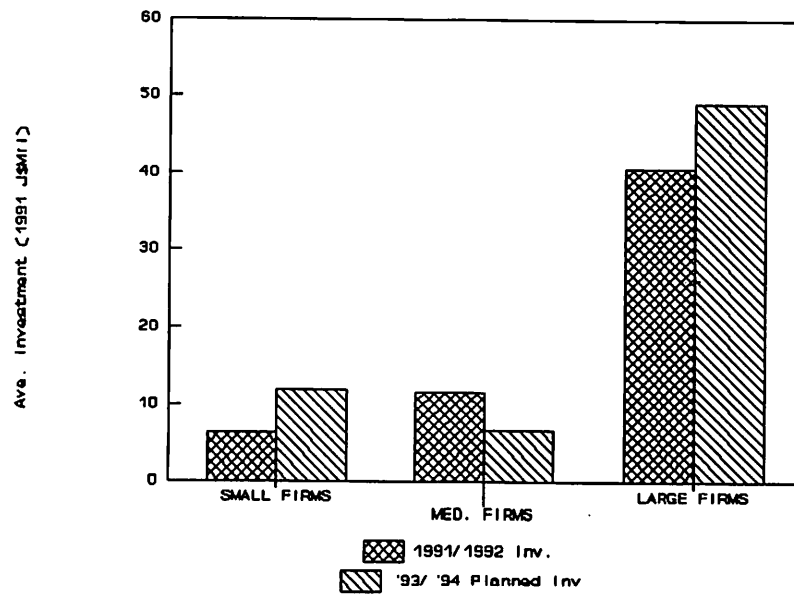
**Fig. 1a: Representation of Sectors**



**Fig. 1b: Sales Performance**  
(Excluding bauxite firms)



**Fig. 1c: Investment Behaviour**



**Firm Size Classification:**

Small: < 50 employees

Medium: 50 - 199 employees

Large: > 200 employees

## II. DESCRIPTION OF SURVEY:

### 1. MAJOR OBJECTIVES:

- The primary objective of the survey was to determine the effect of liberalization on private businesses in Jamaica, particularly the effect on investment. It was hoped that by surveying a broad enough cross-section of Jamaican businesses inferences could be made about changes in economy-wide business behaviour following liberalization which occurred over the second half of 1991. The survey was designed to capture objective data in the form of actual dollar value of investment, sales and profitability (see Q.2a, Q.3, Q.6a & b and Q. 7 in Appendix A) in the year prior to liberalization, and in the years since liberalization. In addition, subjective responses were solicited on the effects of decontrol/liberalization on investment and profitability (Q.5b) to act as a check on the objective data, since it was expected that because of tax implications some inaccurate data may have been obtained.
- ② The second objective of the survey was to identify the major problem areas facing businesses in the post-liberalization economy. Two questions addressed this issue (Q.5a and Q.8). It was hoped that from the responses to these questions policy recommendations could be structured to relieve some of the pressing problems facing Jamaican businesses.
- ③ The third objective of the survey was to determine if there had been any changes in export volume and export pattern since liberalization. The generally held belief is that liberalization facilitates export activity due to increased competitiveness following the reduction in domestically-sourced factor costs resulting from devaluations.

## 2. METHODOLOGY:

1 The method of stratified random sampling was used to select firms for surveying. This method involves grouping of firms into industry categories prior to the selection process to minimize the degree of variation between the firms, and hence tends to produce better statistical estimates<sup>2</sup>. In keeping with this, an effort was made to get a sample representative of the actual firm size distribution, and export orientation in the economy.

2 The second stage of sample selection involved using a random number table to select firms at random from each industrial category. The target sample size was set at 500 firms in order to facilitate statistical analysis, and to obtain a high degree of reliability in these analyses.

3 A survey questionnaire (see Appendix A) was designed to elicit responses which would provide answers to some questions of interest which are tabulated in section III.2, and to satisfy the objectives outlined in part 1 of this section. Field personnel were selected to conduct the interviews, instead of using mail surveys, in order to increase the response rate. The interviews were conducted with senior executives of the targeted firms, as they have the authority to release the requested information, and would either have the data themselves, or could designate someone else from within the organization. Prior to going out into the field the interviewers were given an orientation which explained the purpose, nature, and importance of the survey. In order to understand nuances in the data, the analyst, Dr. Robert Chambers, went on three field surveys. Finally, an attempt was made to assure the anonymity of the firms by not putting their names on the questionnaires in order to get more truthful responses.

Upon the receipt of the completed questionnaires the data were checked by a quality control person prior to data entry. The quality control was designed mainly to standardize responses so that the data entry personnel would not need to interpret the data on the questionnaires.

---

Jampro was a source of most of the data on the firms.

### 3. DATA PROCESSING AND ANALYSIS

Eleven data files, each containing an average of 3,000 pieces of data, were constructed to hold the data and to compute the statistics of interest. These files were built within LOTUS 1-2-3 to facilitate computations and graphical presentations (the names of the data files appear below). Statistical analysis was performed, appealing to the notion of sampled firms being representative of the business community as a whole. Thus, a z-statistic was used to determine if there was any significant difference in business investment behaviour since liberalization (see Appendix B). The results from the survey which suggest a **pattern or trend** in economic activity (investment, sales, etc.) may be reliably interpreted as representing those of the entire business community. However, those results which suggest a certain **level** of economic activity cannot be extrapolated to the entire business community with the same degree of confidence.

#### LIST OF DATA FILES:

(All files are on PSOJ's COMPAQ Computer in the LOTUS directory C:\123R24).

1. BBSQ1AS (Question 1)
2. BBSQ2AS (Question 2A)
3. BBSQ2BS (Question 2B)
4. BBSQ3S (Question 3)
5. BBSQ4S (Question 4)
6. BBSQ5S (Question 5)
7. BBSQ6ABS (Question 6A & B)
8. BBSQ6CDS (Question 6 C & D)
9. BBSQ7S (Question 7)
10. BBSQ8S (Question 8)
11. BBSQ9S (Question 9)

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### **III. RESULTS FROM THE SURVEY:**

This section presents the results from the survey in two parts. Part 1 presents the summary of the answers to the actual questions asked on the survey form. Part 2 presents responses to some specific questions in which the PSOJ had an interest.

## **1. SUMMARY OF RESPONSES TO THE SURVEY QUESTIONS**

This section presents the detailed results in summary form for each question on the Business Behaviour Survey form shown in Appendix A.

### **Question (1a): Summary of Firms in Sample**

**Table 1: Sample Summary**

<b>Industry Category</b>	<b>Number In Sample</b>
Wholesale/retail	37
Manufacturing	58
Agriculture	14
Ag. Processing	10
Finance	21
Mining	6
Construction	20
Tourism	52
Insurance	6
Transport	1
Other	25
<b>TOTAL NO. FIRMS</b>	<b>250</b>

### **Question (1b): Total Number of Employees of Sample Firms.**

The total number of employees of the sample firms was 61,973

## Question (2a): Domestic and Export Sales over Sample Period.

**Table 2a.1: Domestic and Export Sales**

Year	Exch. rate (J\$/US\$)	Domestic (J\$Mil)	Domestic (US\$Mil)	Export** (US\$Mil)	Total (US\$Mil)
1990	7.7	12583.64	1634.238	529.1	2163.338
1991	13	19579.9	1506.146	635.7	2141.846
1992	25	32650.04	1306.001	805.84	2111.841
1993(proj)	25	34230.59	1369.223	963.5	2332.723

**Definition of Exports: Merchandise plus services**

**\*\* Excludes bauxite firm exports**

**Table 2a.2: Distribution of Exports (%)**

YEAR	USA	CAN.	UK	REST EEC	CARICOM	OTHER CARL.	R.O.W.
1990	55	9	11	10	12	2	1
1991	53	10	10	13	10	2	2
1992	50	10	11	15	10	2	2
1993	48	9	13	14	11	2	3

## Question (2b): Percentage of Exports to Selected Markets

**Table 2b: Average Percentage of Exports Destined for Selected Markets**

(Interpret results as: "Of the firms reporting country X as a destination an average of Y% of their exports went to country X)

Country/Area	1990	1991	1993
Caricom	68.7	69	64.6
Other Carib.	9.8	6.5	11.9
U.S.A.	60.5	59.3	56
U.K.	37	34.2	35.7
Other EEC	24.6	28.6	32.8
Canada	14.3	15.9	14.2
Misc.	20.2	21.1	20.1

### Question 3: Investments as a Percentage of Revenues

**Table 3: Investment As a Proportion of Gross Revenues**

AREA	Time Period			
	1990	1991	1992	1993
Market Research	2.8	3.5	3.7	3.7
R&D	5	5.1	5.3	5.3
New Technology	7	6	7.4	8.3
Training	2.8	3	3.3	3.7
Miscellaneous	3.4	5.5	4.3	4.2

### Question 4: Capacity Utilization

**Table 4: Capacity Utilization**

(Percentage of fixed assets utilized)

Capacity Utilized	Number of Firms	Percentage of Firms
0-9%	6	2.5
10-19	5	2.1
20-29	4	1.7
30-39	7	3
40-49	15	6.3
50-59	20	8.4
60-69	32	13.5
70-79	36	15.2
80-89	29	12.2
90-99	32	13.5
100	57	24.1
<b>Total</b>	<b>237</b>	<b>100</b>

### **Question (5a): Factors Acting as Constraints to Productivity**

**Table 5: Constraints on Firms**

<b>Factor</b>	<b>No. Responses</b>	<b>% Responses</b>
Quality of Labour	95	31.2
Technological obsolescence	50	16.3
Utility supplies	49	16.1
Scheduling (Supplies & Fin. Goods)	36	11.8
Other (See Quest. 8)	75	24.6
Total:	305	100

### **Question (5b): Effect of Decontrol/Liberalization on Investments and Profitability**

No. Firms indicating no effect: 63

No. Firms indicating they were affected: 171 (73%)

Of those affected :

Impact on investment:	58.1% increase on average
	36.8% decrease on average
Impact on profitability:	45.1% increase on average
	37.7% decrease on average

### **Question (6a): Investments Undertaken between Liberalization (9/91 to 12/92).**

Total number of projects: 99 (Export related - 53; dom. mkt. - 46)

Total investments (1991 J\$ Mil.): \$6,754.9

### **Question (6b): Investments to be Undertaken in 1993 and 1994.**

Total number of projects: 123 (Export related - 65; Domestic - 58)  
(Between 1993 and 1994)

Total 1993 - 1994 planned investments (1991 J\$ Mil.): \$7,397.2

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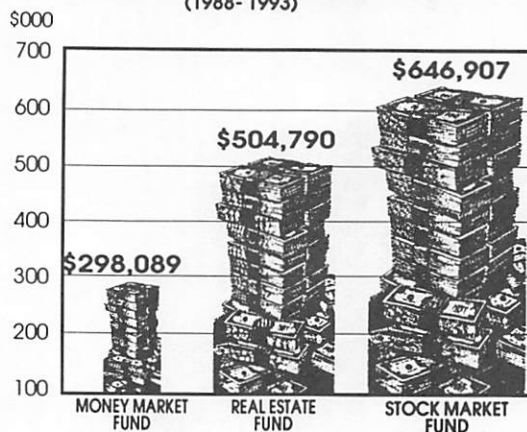
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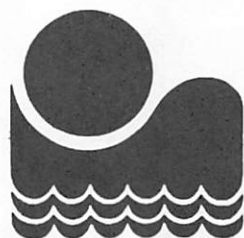
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### Question (6c): Broad Uses of Investment Funds

**Table 6.1: Use of Investment Funds**

	[Percentage of Funds]		
	91/92	1993	1994
<b>ACTIVITIES</b>			
NEW CAPACITY	82.8	84.1	74.7
INCREASED PRODUCTIVITY	4.3	4.9	6.6
MERGERS & ACQUISITIONS	11.1	8.6	16.3
BUY AGRICULTURAL LAND	1.8	2.4	2.4

### Question (6d): Sources of Investment Funds

**Table 6.2: Distribution of Financing  
(Percentage from each source)**

Financing Source	1991/1992		1993/1994	
	Debt	Equity	Debt	Equity
INT'L ORG.	8	1	9	4
REG. INST.	1	0	3	1
JAM. INST.	69	10	70	9
PRIVATE	12	13	11	13
RET. EARN.	—	69	—	69
MISC.	10	7	7	6
<b>TOTAL:</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

	1991/1992	1993/1994
LOANS	48%	45%
RET. EARN	36	37
STOCK	16	18
<b>TOTAL:</b>	<b>100</b>	<b>100</b>

## Question 7: Incremental Sales and Employment Due to Investment

**Table 7.1: Effects of Investment**  
(All Dollar Figures in Millions of '91 Dollar)

	1991/1992	1991/1992
ADD. DOM. SALES (J\$)	2113.7	2113.7
ADD. EXPORTS (US\$)	45.0	45.0
ADD. EMPLOYMENT	5247	5247

**Table 7.2: Sectoral Effect of Incremental Investment**

Ind. Seg.	'92 Local Market J\$ Mil.	'92 Export Market US\$ Mil.	'92 Add Workers	'93 Local Market J\$ Mil.	'93 Export Market US\$ Mil.	'93 Add Workers
Wholesale/Retail	333.2	24.8	489	327.8	35.4	839
Manufacturing	328.1	29.8	2,366	385.1	37.8	957
Agriculture	154.4	8.1	136	48.3	5.1	83
Food Proc.	58.7	-3	16	328.1	35.5	347
Finance	411.7	28.7	381	406.2	9.3	1,174
Mining**	0	-81.1	188	0	49.5	191
Construction	37.8	0.09	630	62.5	0.85	96
Tourism	41.0	5.1	146	77.3	6.5	1,950
Insurance	174.7	30.0	760	612.5	10.0	0
TOTALS:	1,539.6	42.49	5,112	2,247.8	189.95	5,637

\*\* The Mining Sector includes bauxite.

Note: No data available for transportation sector.

## Question 8: Ranking of Problems Facing Jamaican Businesses

**Table 8.1: Serious Issues Facing Businesses**

CATEGORY	RANK (1-highest, 5-lowest (Percentile in rank))				
	1	2	3	4	5
High Taxes	15	8	9	9	13
Customs procedures	6	7	3	6	6
Gov't regulations	10	10	10	9	7
Worker productivity	8	11	6	10	8
High inflation	9	14	14	9	9
Scarcity of equity capital	5	2	5	3	3
Shortage of skilled labour	3	3	10	10	5
High interest rate	22	18	17	12	9
NAFTA, EEC, CBI, etc.	0	2	1	2	5
Scarcity of foreign exchange	12	10	7	6	9
High utility rates	3	9	7	11	14
Infrastructure constraints	2	4	5	6	6
Import/export procedures	1	2	4	6	5
Misc. gov't related	2	1	1	1	3

**Table 8.2: Top Six Problems Facing All Jamaican Businesses**

1. High interest rates
2. High taxes
3. High rate of inflation
4. Scarcity of foreign exchange
5. Customs Procedures
6. Low worker productivity

**Table 8.3: Top Three Problems Facing Firms By Industrial Sector**

<b>Ind. Sector</b>	<b>Biggest Problem</b>	<b>Second Biggest Problem</b>	<b>Third Biggest Problem</b>
Wholesale/Retail	High Interest Rate	Scarcity of foreign exchange	High Inflation
Manufacturing	High Interest Rate	Excessive Government Regulations	Customs Procedures
Agriculture	High Interest Rate	Excessive Government Regulations	Customs Procedures
Agr. Processing	High Interest Rate	Customs Procedures	High Inflation
Finance	Scarcity of Foreign Exchange	High Interest Rate	Excessive Government Regulations
Mining	High Taxes	Excessive Government Regulations	Scarcity of Equity Capital
Construction	Customs Procedures	High Interest Rate	High Inflation
Tourism	High Interest Rate	High Inflation	High Utility Rates
Insurance	High Taxes	High Inflation	Scarcity of Foreign Exchange

NOTE: This listing captures information on how each industry views problems for itself and other industries also (see wording of question 8, p. 40).

## **Question 9: Expected Future Role of Exports in Growth of Firms**

**Table 9: Role of Exports In Firm Growth**

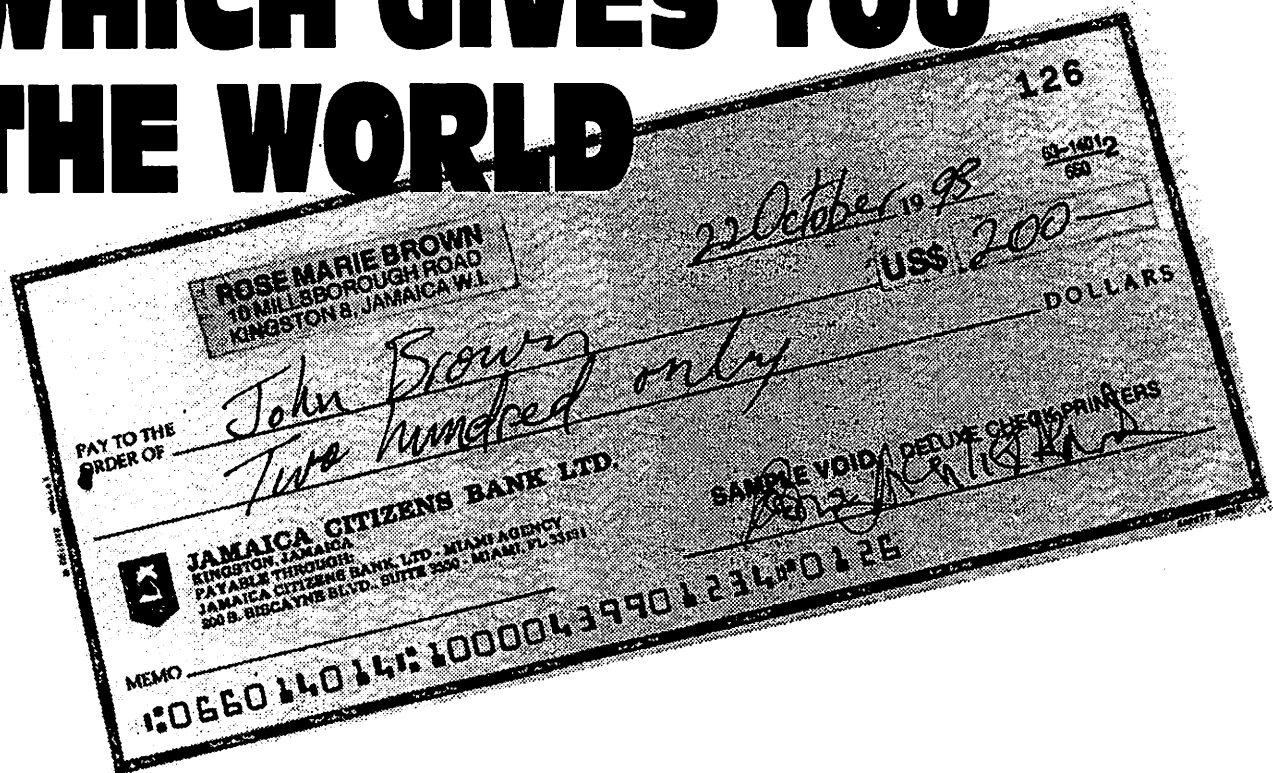
<b>Year</b>	<b>Percentage of firms Indicating Increasing role (Ave. % Increase)</b>	<b>Percentage of firms Indicating Decreasing role (Ave. % Decrease)</b>	<b>Percentage of firms Indicating No Change</b>
1993	94 (41.6)	5 (22.1)	1
1994	95 (43.2)	4 (28)	1

## **III.2 RESULTS FROM ANALYSIS OF RESPONSES**

This section presents the results of the analysis in the form of answers to thirteen specific questions posed by the PSOJ, which summarized their major areas of interest in the Business Behaviour Survey. Many of these questions can be answered directly from the tables in Section III.1, however, graphical presentations are shown to facilitate interpretation of the tabular data. The list of questions addressed in this section is as follows:

Question 1A:	Causal Relationship between investment and liberalization	(p.23)
Question 1B:	Sector level analysis of Investments	(p.23)
Question 2:	Additional annual sales and employment from Investments	(p.25)
Question 3:	Sources of Investment Funds	(p.26)
Question 4:	Role of Exports in 1993-1994	(p.28)
Question 5:	Industry perceptions of the effect of decontrol/devaluations on investment and profitability	(p.28)
Question 6:	Changes in domestic and export sales	(p.29)
Question 7:	Changes in the primary destination of Jamaican exports	(p.29)
Question 8:	Changes in specific areas of investments	(p.30)
Question 9:	Capacity Utilization and productive efficiency	(p.31)
Question 10:	The roles of capital access and cost of investments	(p.31)
Questions 11 & 12:	Sectoral analysis of exports and investments	(p.32)

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## **Question 1.A: Causal Relationship between Investment and Liberalization**

### **1. RESULTS BASED ON FIRM SIZE:**

Rigorous statistical analysis was done to determine if a link between investment and liberalization exists. The firms were grouped according to size to minimize variance, which would tend to give more significance to the link between investment and liberalization. At a typical minimum significance level of 95% a positive link was found for small firms, but no link could be found between investment and liberalization for other classes of firms. (See Appendix B).

### **2 RESULTS BASED ON INDUSTRIAL SECTOR:**

It was suspected that, at least for large firms (i.e., firms with more than 200 employees) the variance in the level of investment was so large that it lowered the significance of the link between investment and liberalization for this class of firms. Since further reclassification into smaller groups based on size was not possible due to the relatively small number in the sample, analysis was attempted at the industry level. However, due to the small number of firms (at least 30 is thought desirable) in most industry groups rigorous statistical analysis was not possible for all industries (see Figure 17 for number of firms reporting in each sector). Nevertheless, when one examines the sectorial responses (see Figure 12) to the question of decontrol and investment (survey Question 5b) the overwhelming response is that it did have an effect, and the effect was generally thought to be positive (See "Question 5", and "Questions 11 & 12" in this section also). In addition, there were 123 investment projects in the first full year after liberalization, compared to 99 the year prior. In summary, while rigorous statistical tests cannot find an overall causal link due to technical reasons (lack of data, and high variability of data) it is believed that liberalization has positively affected investments.

#### **A NOTE ON LIBERALIZATION AND PROFITABILITY:**

The data on profitability are far less than those on investment, precluding a high degree of formal statistical analysis. However, of those respondents indicating that liberalization increased profits, the average increase was 45%, while those indicating a decline reported on average 38% decrease. Also, there appears to be a positive link between profitability and the degree of export orientation.

## **Question 1.B: Sector-Level Analysis of Investments**

(See Table 7.2 for specific dollar investments)

It can be seen from Table 10 that investments were most likely to occur in mining, insurance, and food processing sectors (mining sector investment data dominated by bauxite firms). Additionally, these investments were more likely to occur in medium and large size businesses. However, when investments occurred (See Table 7.2) they had the greatest impact in the finance sector, resulting in more sales.

**Table 10: Tendencies Towards Investment**

<b>Industry</b>	<b>Probability of a firm Making Investment</b>	<b>Probability of Investing Outside of Own Sector (1993 – 1994)</b>
Wholesale/Retail	75%	50%
Manufacturing	75%	25%
Agriculture	75%	15%
Agri. Processing	Approx. 100%	20%
Finance	70%	40%
Mining	Approx. 100%	Close to 0%
Construction	75%	Close to 0%
Tourism	80%	25%
Insurance	Approx. 100%	50%

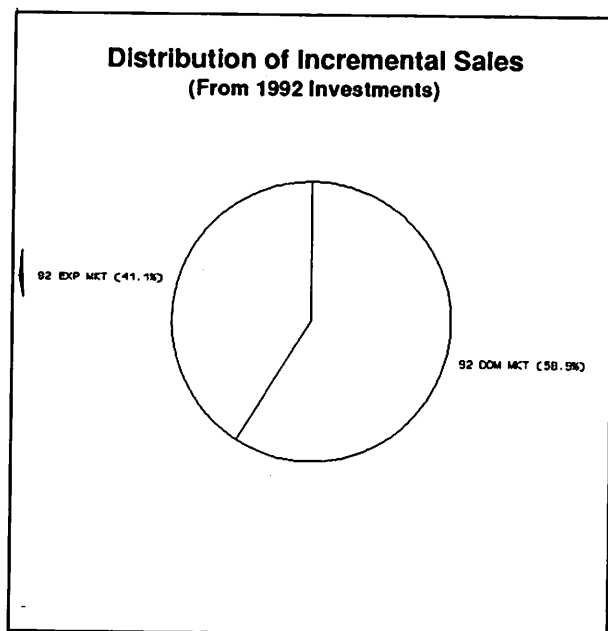
**Size and Investment**

<b>Size of Firms</b>	<b>Probability of Firm Making Investment</b>
Small	60%
Medium	90%
Large	85%

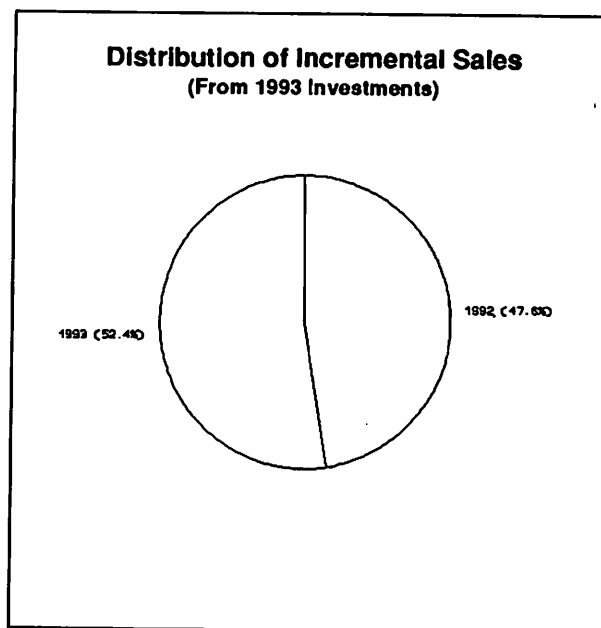
(These results cover the entire period 1991 to 1994)

## Question 2: Additional Annual Sales and Employment from Investments

Figure 2 shows that more sales in the domestic market were obtained from investments during 1992 than those in the export market. This is not surprising given that there were more investment projects aimed at the domestic market during that year than for the export market (53.5% vs 46.5%). However, the projections for 1993 promise to reverse this situation, with approximately 58% of incremental sales expected to come from exports (See figures 5 & 6 for 1992/1993 comparisons).

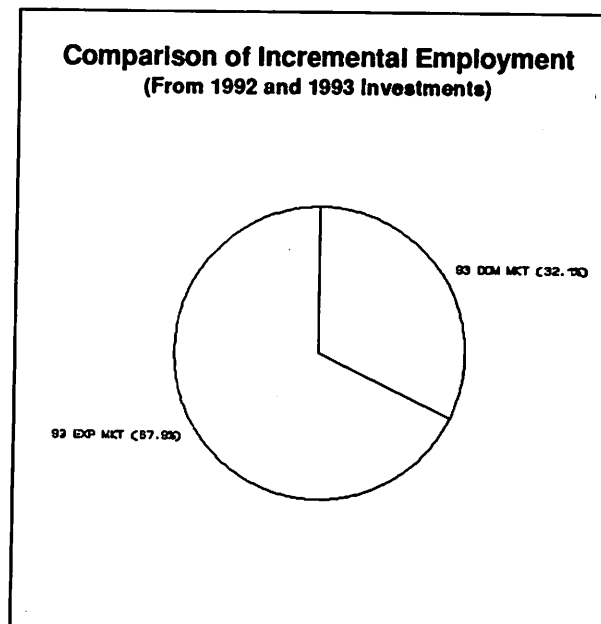


**Figure 2**  
(See table 7.2 for sector details)



**Figure 3**

On the subject of employment, table 7.2 shows that 5,112 additional persons were employed as a result of the investment activities undertaken in 1992. This figure is expected to increase to 5,637 persons by the end of 1993. Figure 4 below summarizes these results.



**Figure 4:  
Additional Employment  
due to Investments**

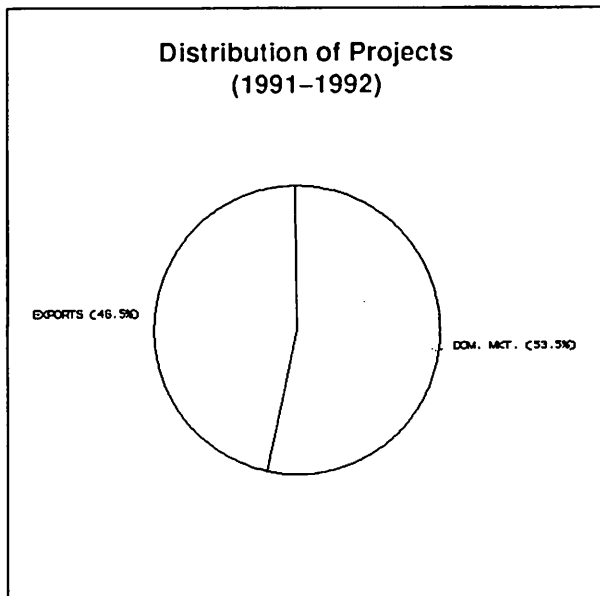


Figure 5

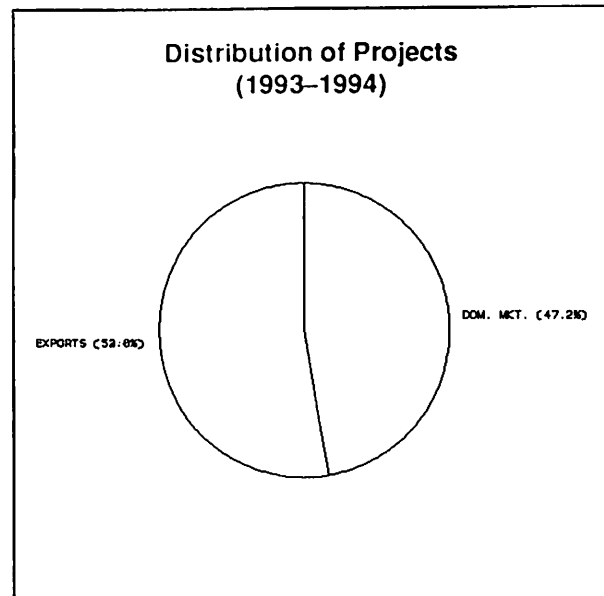


Figure 6

### Question 3: Sources and Uses of Investment Funds

Table 6 (d) shows that the major source of investment funds was debt obtained from Jamaican institutions (Commercial Banks). The firms surveyed expect this to be once again the major source of funds through 1994. This was the case across all industrial sectors. Figures 7 & 8 also show that retained earnings is the second most used source of financing, and demonstrate the relative unimportance of the stock market for business overall. Figures 9 -11 show that the major use of funds were for capacity expansion, with mergers and acquisitions the number 2 use of funds. The expectation is that by 1994 mergers and acquisitions will significantly increase (compare figures 10 & 11).

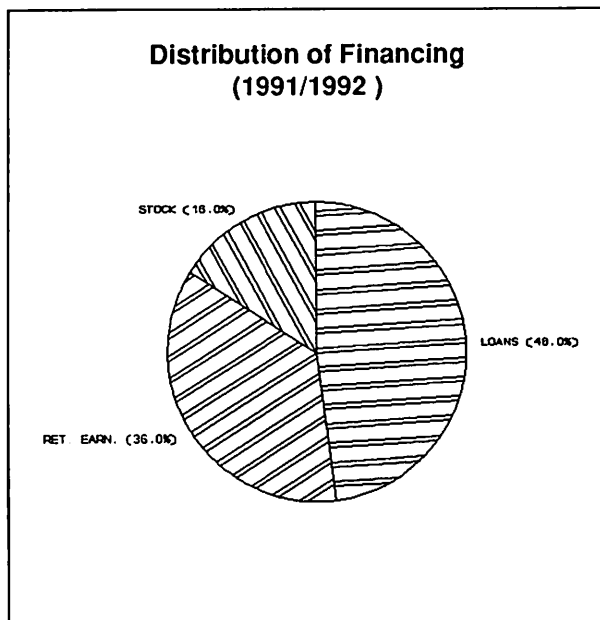


Figure 7

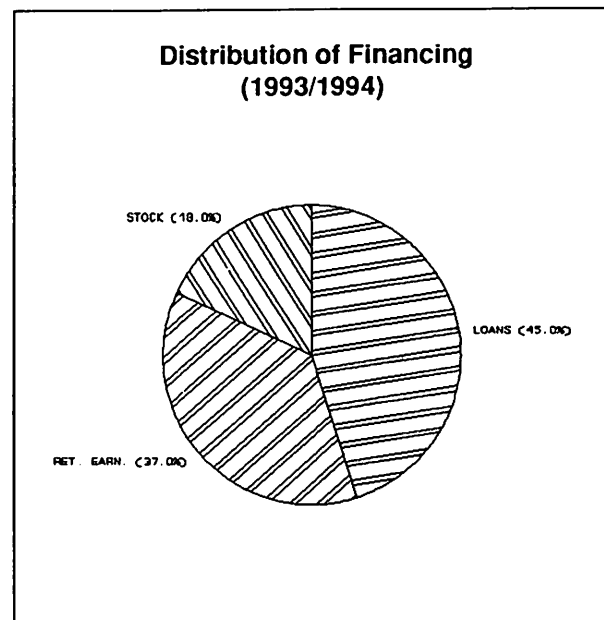


Figure 8

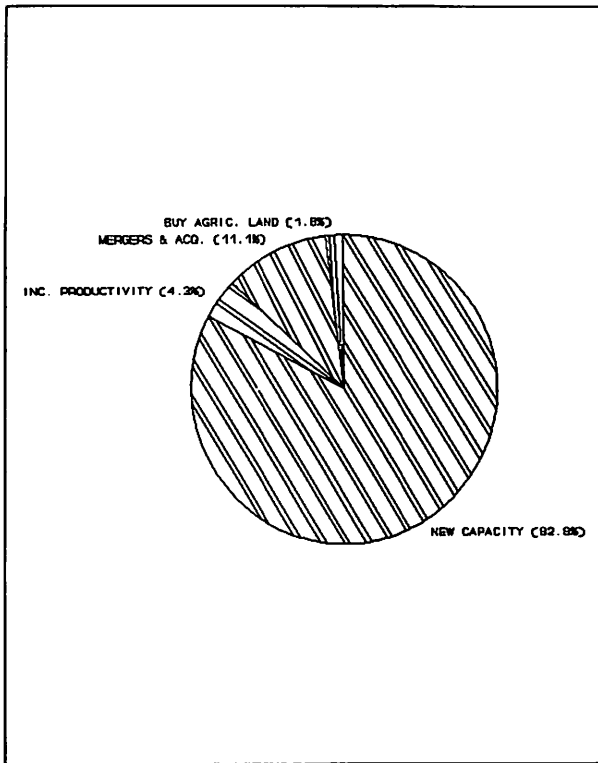


Figure 9: Use of Funds 1991–1992

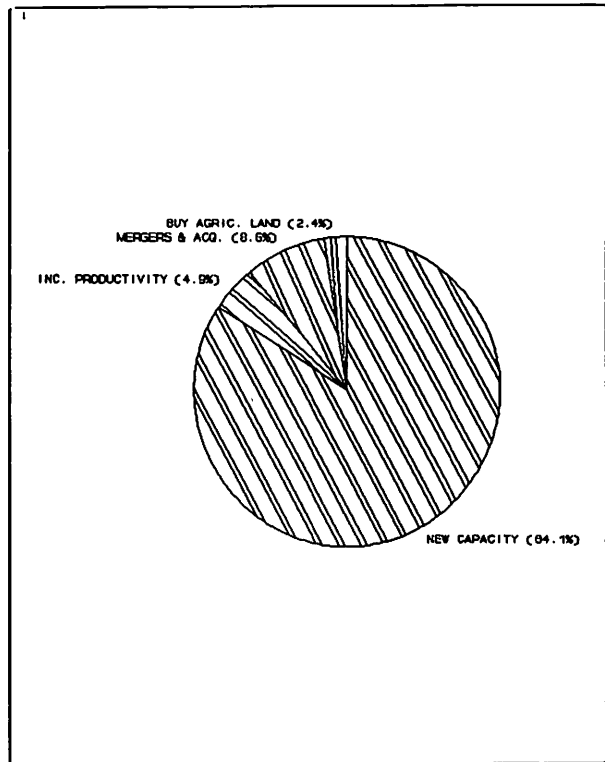


Figure 10: Use of Funds 1993

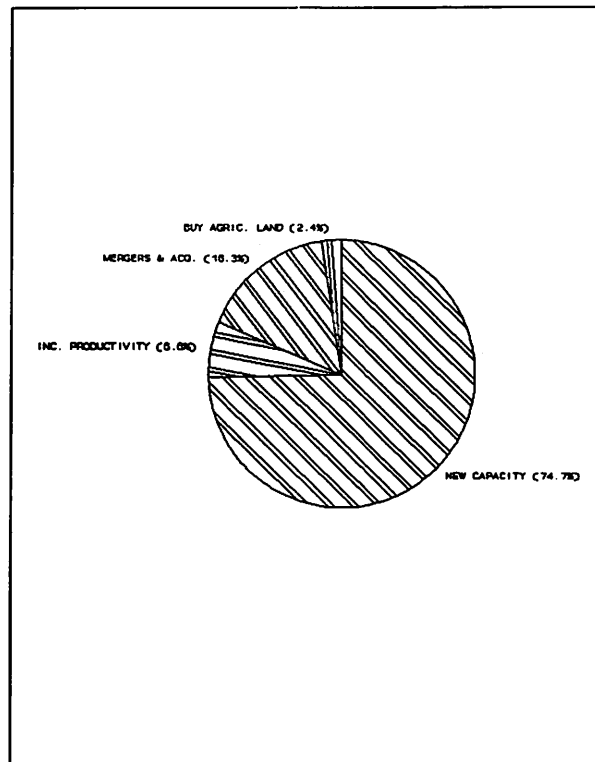


Figure 11: Use of Funds 1994

#### Question 4: Role of Exports in 1993 - 1994

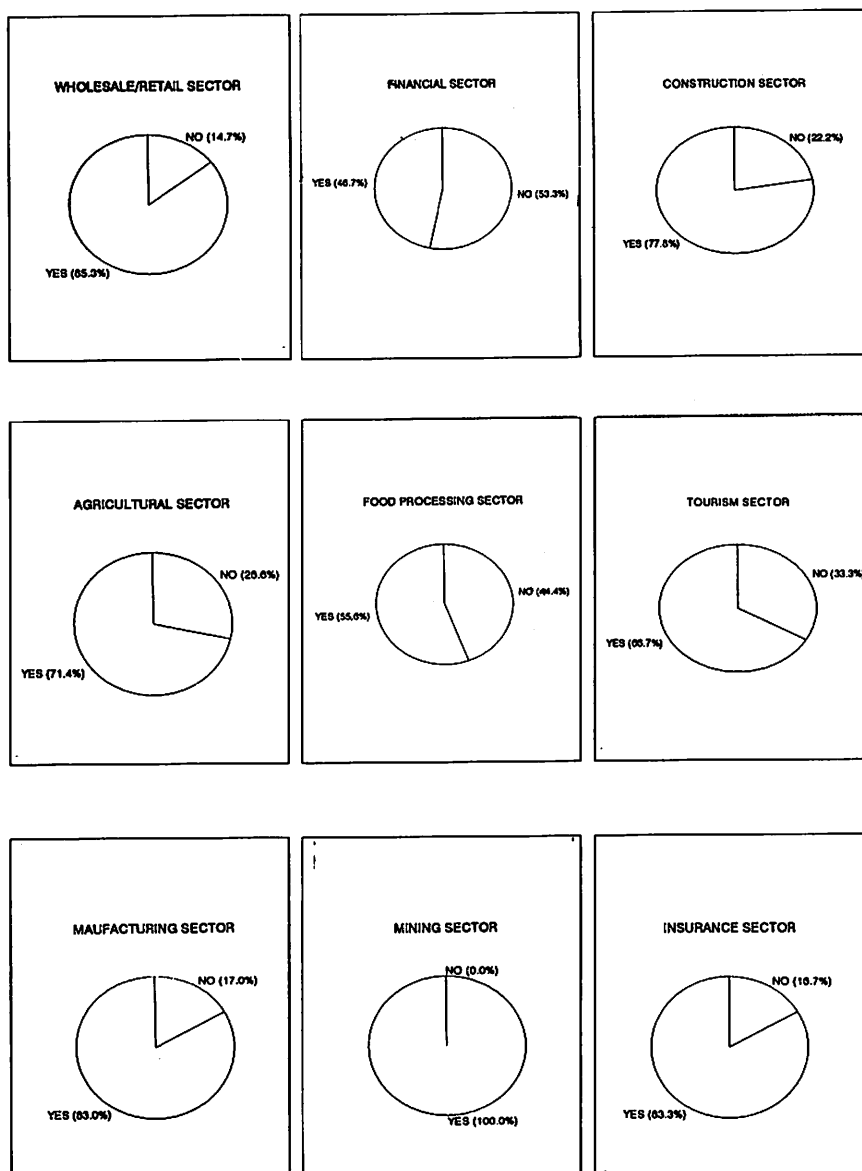
Most of the firms in the survey (approximately 95%) expect exports to play an increasing role in their growth in 1993 and 1994. The average projected positive contribution of exports was approximately 42% for both years. Of the 5% of the firms responding that exports would play a decreased role, the average projected reduction in company growth due to declining exports was 22% in 1993 and 28% in 1994. Generalizing the results to the business community as a whole, it can be said that most Jamaican businesses which either export, or plan to export, are relying on increased export sales for a substantial portion of the near-term growth of their companies.

(Ref. Table 9 for detailed data)

Fig. 12: Did Decontrol Affect Investment Plans and Profitability

#### Question 5: Industry Perceptions of The Effect of Decontrol/Devaluations on Investment And Profitability

Survey Question 5 (b) solicited responses on industry perceptions of the impact of decontrol, or devaluation, on their businesses. Figure 12 shows that for the majority of industries the perception was that decontrol/devaluation had an impact on both investments and profitability. The general feeling was that it had resulted in a significant increase in investments, but there was a lesser overall positive impact on profitability. (See Question 5B) summary in Section III.1).



## Question 6: CHANGES IN DOMESTIC AND EXPORT SALES

Table 2a.1 shows that domestic sales had declined in real terms by 13% one year after liberalization (comparing 1992 sales figures to those of 1991). However, over the same period export sales increased by 27%. The expectation by firms is that domestic sales should increase slightly in 1993 (up 5%), and that exports will increase at a somewhat lesser rate, increasing by 20%. However, despite the performance of exports, total sales is not expected to recover to the 1990 levels due to the impact of the domestic market. (See Figure 1b). Sectorally, the garment industry of the manufacturing sector showed the best export performance, while the finance sector showed the best performance in the domestic market.

## Question 7: Changes in the Primary Destination of Jamaican Exports

Figure 13 below shows that there has not been any shift in the primary destination of Jamaica's exports. The United States continues to be the number one export destination. Exports to the United Kingdom continue to vie for second place with the combined exports to the non-UK European Economic Community. Exports to Caricom are expected to exceed those to Canada by the end of 1993.

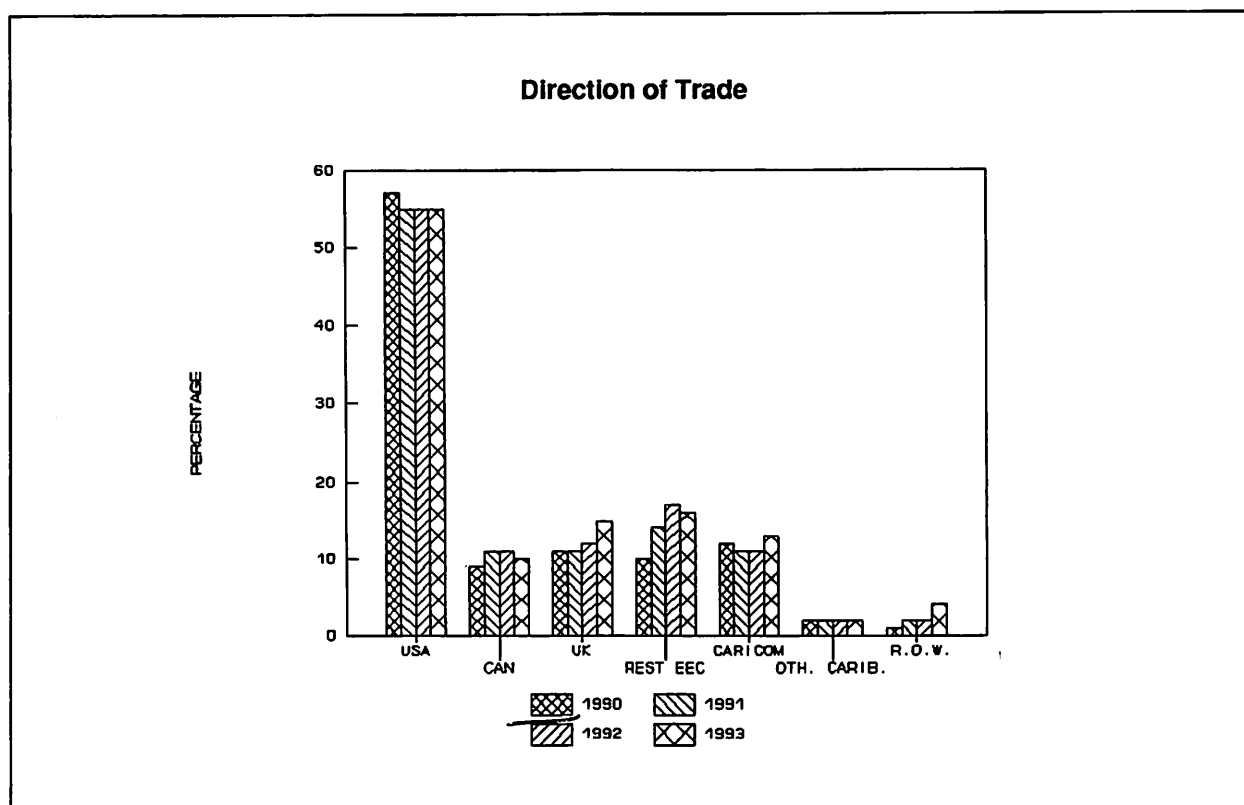
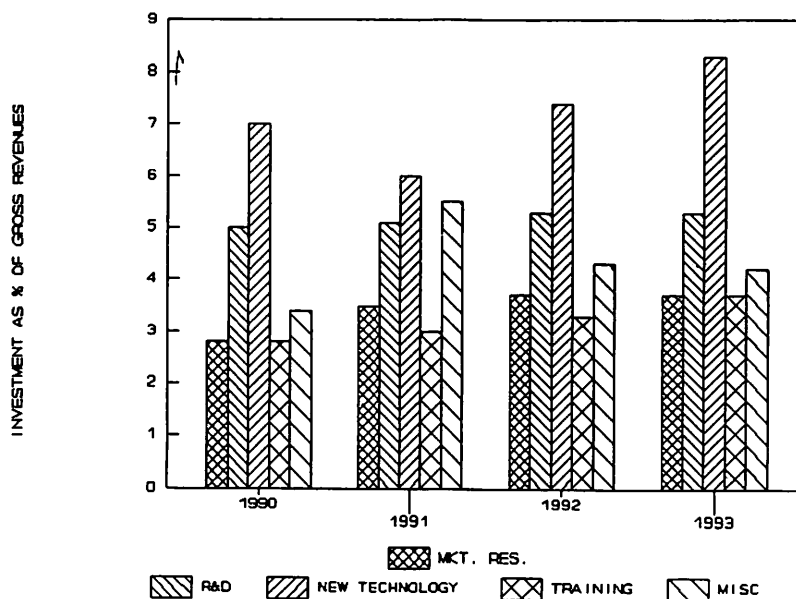


Figure 13

### Question 8: Changes in Specific Areas of Investment

Figure 14 below shows that new technology (in the form of equipment, patents, and franchises/licenses) continues to be the number one area for investment. The average investment in new technology has been just over 7% of gross revenues. Research and Development (almost exclusively product development) continues to be the number two area for investment (this is a surprising result, since official statistics, eg. International Financial Statistics, show Jamaica's R & D expenditures to be two orders of magnitude lower). Investment in market research and employee training continue to vie for the number three spot. The message here is that there have not been any relative shifts in investment pattern, just an overall increase in the proportion of gross revenues going towards investments. This is the same across all industrial segments.

**Fig. 14: Investments (% Revenues)**



### Question 9: Capacity Utilization and Productive Efficiency

Table 10 below shows that capacity utilization was not a problem for most firms - 65% of all firms operated above 70% of capacity. However, there was a tendency for a significant number of firms in some sectors to operate at substantially reduced capacity (i.e. less than 50%). These industries were: manufacturing, agricultural (food) processing; and mining (mainly bauxite). On the positive side, over 20% of all firms reported that they were operating at full capacity, with this tendency being highest in the agricultural sector.

On the subject of productive efficiency, across all industries the poor quality of labour/shortage of skilled labour was cited as the major problem constraining overall productivity (see Table 5a).

**Table 11: Sectoral Capacity Utilization Rates (% Fixed Assets Used)**

% Cap.	Wholesale Retail	Mfg.	Agri.	Agr. Proc.	Finance	Mining	Constr.	Tourism	Insurance
0 - 9	3	2	7	10	0	0	0	0	0
10 - 19	3	5	0	0	0	0	0	0	0
20 - 29	0	4	0	0	0	0	0	2	0
30 - 39	3	4	7	0	0	0	11	2	0
40 - 49	6	5	0	20	5	25	5	4	17
50 - 59	6	11	21	0	16	0	11	6	0
60 - 69	14	9	0	30	16	25	11	16	0
70 - 79	8	18	7	0	11	25	16	24	17
80 - 89	19	7	14	10	21	0	21	10	33
90 - 99	17	11	0	10	5	0	11	16	17
100	22	24	43	20	26	25	16	22	17

### Question 10: The Roles of Capital Access and Cost of Investments

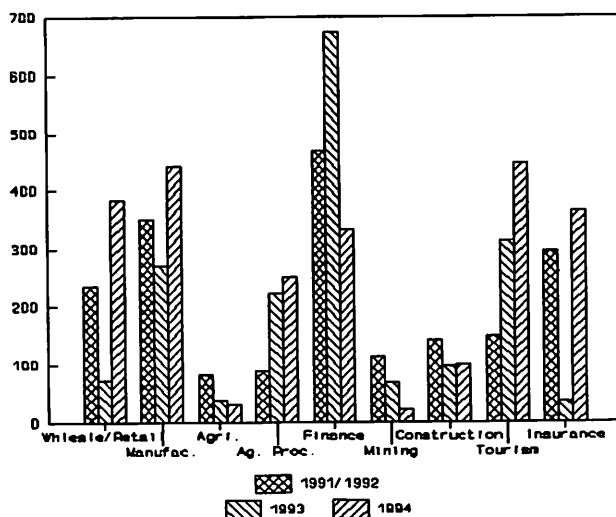
Across all industrial sectors the cost of debt capital is identified as the most significant area of concern for investments (74% of all respondents marked it as the number one problem). This is unfortunate, because debt capital is the major source of investment funds, and this market is more highly developed (particularly in the banking sector) than the equities market.

## Questions 11 & 12: Sectoral Analysis of Exports and Investments

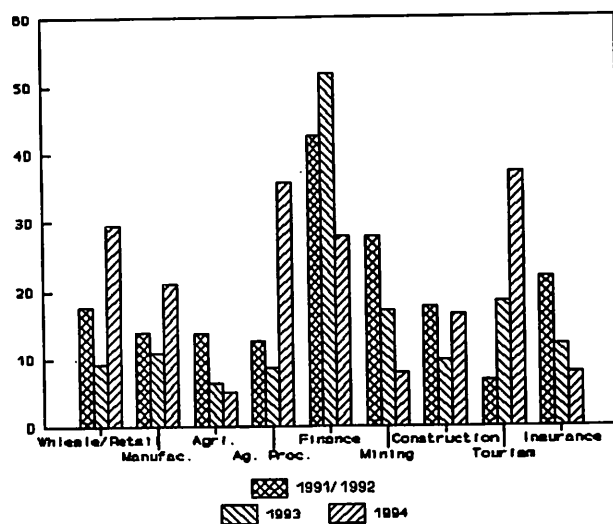
On the subject of exports, the data did not reveal any important insights, or new trends as related to sectoral performance, except that the garment sector is now one of the top exporting sectors. The mining sector (bauxite and alumina), and tourism continue to lead in export sales. It is worth noting, however, that the survey revealed the emergence of foreign investment activity in the financial and insurance sectors since liberalization. The general trend in exports is upwards, but as was mentioned in a footnote in the Executive Summary of this report, this upward trend may be difficult to sustain, due to weak demand in the markets to which the exports are destined.

In the area of investments the results are interesting. The finance sector has significantly increased investments in absolute and on a per firm basis; some weakening is however, anticipated for 1994. Investments in the Tourism sector have also increased significantly. Investments in the Mining, Insurance, and Agriculture sectors are expected to decline. Figures 15 - 17 provide a summary of the sectoral investment performance.

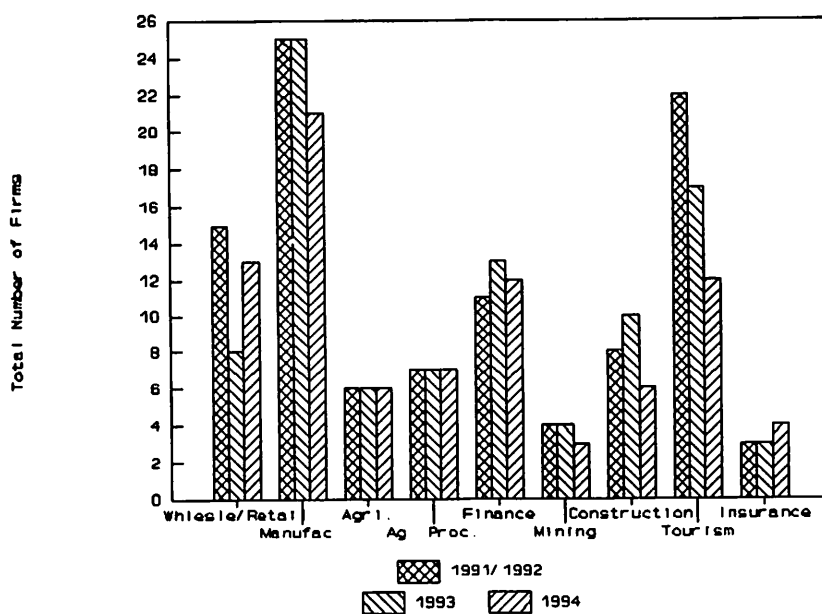
**Fig. 15: Total Investments By Sector**  
(1991 J\$MII)



**Figure 16: Average Investments By Sector  
(1991 J\$M/l)**



**Figure 17: Firms Reporting Investments  
(By Sector)**



## IV: SUMMARY AND CONCLUSIONS

### 1. SUMMARY:

The following points are worth noting from the survey, as they summarize the main findings.

1. Liberalization appears to have benefitted Jamaican businesses, as measured by planned increases in investments, increases in profitability and exports.<sup>3</sup>  
However, domestic sales have suffered, presumably due to the reduction in real incomes caused by the devaluations accompanying liberalization.
2. There has not been any shift in the destination of Jamaican exports since liberalization. However, there has been a general increase in the proportion of exports going to Europe.
3. There has not been any shift in either the usage nor primary sources of investment funds among businesses. Investment in capacity expansion in the form of new equipment and technology is the major use of investment funds, while local commercial banks are the main sources of funds. Investment plans have shifted in favour of the export market.
4. The finance, distributive trade, and manufacturing sectors have made the largest gains from their investments since liberalization. Manufacturing has made the largest contribution to job creation from new investments since liberalization (approximately 50%). Most of the new jobs and investments in manufacturing have come from the garment industry.
5. Firms are generally operating above 70% of capacity. The service industries operate at a higher capacity level than manufacturing and agriculture related firms.
6. High interest rates, inflation and taxes are the top three problems facing Jamaican businesses. These are problems outside of the control of firms. Of the problems within the control of firms, low worker productivity ranks as number 6, and shortage of skilled labour ranks as number 12<sup>4</sup>.
7. Most of the future near-term growth prospects of Jamaican businesses are tied to exports.

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<sup>3</sup> A more definite statement cannot be made, since alternative explanations for the increases were not explored.

<sup>4</sup> Firms can redress the problem of shortage of skilled labour by a combination of high wages, and in-house training.

## 2. CONCLUSIONS

V.I. ③ ①  
Two basic conclusions can be drawn from the survey. First, at an elementary level, this survey proves that it is possible to extract meaningful information from the business community, providing certain criteria are met, namely, the exercise has to seem relevant to businesses ① and a certain degree of anonymity must be guaranteed. At a more fundamental level, the survey revealed that there was a generally positive effect of liberalization on businesses (except on domestic sales). In the areas of planned investment, and expected near-term exports (both measures of business confidence), it appears that increased levels of confidence (perhaps tenuous - see below) were also associated with liberalization.

V.G. ③  
In the area of investments the issue of interest rate is worth addressing by government. The planned increases in investments may fail to materialize if interest rates do not stabilize, or fall, since this is the number one concern among all types of businesses. This is underscored by the high degree of reliance of Jamaican businesses on debt from local commercial banks. A common belief is that scarcity of foreign exchange is the main problem for many businesses, but that was not found to be the case. It appears that policies to improve the imbalances between demand and supply in the official exchange market with high interest rates are contrary to the interest of businesses, i.e., the supply-side of the economy. The continuation of this type of policy could undermine business confidence, and erase many of the gains from liberalization. ① ② ③

①  
Many additional insights can be obtained from the data, even given the problems noted elsewhere in this report. Some of these insights, among others, could include an assessment of the efficiency of capital utilization among industries, and a profile of the firms listing problems of a certain type as the number one issue, among others.

## **V. APPENDIX**

### **A. SURVEY INSTRUMENT**

This section shows the actual questionnaire used to record the responses. The coded numbers associated with each response were used to facilitate data entry.

# APPENDIX A

## U.S.A.I.D./P.S.O.J. – SURVEY OF BUSINESS BEHAVIOUR

Name of Interviewer \_\_\_\_\_

Date \_\_\_\_\_

1. a) Please indicate your type of business activity (**at present**). If you are involved in more than one activity – please rank them in order of contribution to gross revenue (1 – highest; 5 – lowest)

[ ]	<b>1010</b> Wholesale/Retail:	Food ( 1 )	Clothing ( 2 )	Other Consumer Goods ( 3 )	Hardware ( 4 )	Other ( 5 )
[ ]	<b>1020</b> Manufacturing:	Food ( 1 )	Clothing ( 2 )	Other Consumer Goods ( 3 )	Equipment ( 4 )	Other ( 5 )
[ ]	<b>1030</b> Agriculture:	Food ( 1 )		Feed Stock ( 2 )		Livestock ( 3 )
[ ]	<b>1040</b> Agricultural Processing:	Canned Goods ( 1 )		Bottled Goods ( 2 )		Non-Packaged ( 3 )
[ ]	<b>1050</b> Finance:	Loans ( 1 )		Equities ( 2 )		Analysis ( 3 )
[ ]	<b>1060</b> Mining:	Metallic ( 1 )		Non-Metallic ( 2 )		
[ ]	<b>1070</b> Construction:	Residential ( 1 )		Non-Residential ( 2 )		Infrastructure ( 3 )
[ ]	<b>1080</b> Tourism:	Accommodations ( 1 )		Transportation ( 2 )		Attractions ( 3 )
[ ]	<b>1090</b> Insurance:	Life & Casualty ( 1 )		Commercial ( 2 )		
[ ]	<b>1100</b> Transportation:	Taxis/Buses ( 1 )		Freight ( 2 )		
[ ]	<b>1120</b> Other:	_____				

- b) **1200**  
Number of Employees (**at present**) \_\_\_\_\_

2. a) Indicate the value of your domestic and export sales including the primary destination of your export:

Sales	Gross Domestic Sales (J\$)	Gross Export Sales (US\$)	Primary* Export Destination = X
1990	2110	2120	21 0
	[ ]	[ ]	
1991	2111	2121	21 1
	[ ]	[ ]	
1992	2112	2122	21 2
	[ ]	[ ]	
1993 (Proj.)	2113	2123	21 3
	[ ]	[ ]	

Proj. = Projection

\* Values of "X"

America	–	5	Rest of EEC	–	7	Other Caribbean	–	4
Canada	–	8	Caricom	–	3	R.O.W.	–	9
UK	–	6						

- b) Indicate roughly what percentage of your exports went to the following markets and your projections for 1993:

### Percentage (%) of Exports, to Selected Markets

For Tourism interpret as % of visitors served from these countries.

				Projection/ Estimate
1990	1991	1992	1993	
2230 [ ] %	2231 [ ] %	2232 [ ] %	2233 [ ] %	to Caricom
2240 [ ] %	2241 [ ] %	2242 [ ] %	2243 [ ] %	to Other Caribbean Community
2250 [ ] %	2251 [ ] %	2252 [ ] %	2253 [ ] %	to U.S.A.
2260 [ ] %	2261 [ ] %	2262 [ ] %	2263 [ ] %	to U.K.
2270 [ ] %	2271 [ ] %	2272 [ ] %	2273 [ ] %	to other European Community
2280 [ ] %	2281 [ ] %	2282 [ ] %	2283 [ ] %	to Canada
2290 [ ] %	2291 [ ] %	2292 [ ] %	2293 [ ] %	to Other (Specify)

3. Indicate the average percentage of gross revenues invested in:

	% of Gross Revenues	% of Gross Revenues	% of Gross Revenues	% of Gross Revenues
	1990	1991	1992	1993 Projection
Market Research	3110 [ ]	3111 [ ]	3112 [ ]	3113 [ ]
Research & Development	3210 [ ]	3211 [ ]	3212 [ ]	3213 [ ]
Acquisition of Technology — patents, license/franchise, machines, etc.	3310 [ ]	3311 [ ]	3312 [ ]	3313 [ ]
Training and Employee Development	3410 [ ]	3411 [ ]	3412 [ ]	3413 [ ]
Other	3510 [ ]	3511 [ ]	3512 [ ]	3513 [ ]

4. **Capacity Utilization** represents the percentage utilization of Fixed Assets (machinery, hotel rooms, etc.)

Indicate the level of capacity at which you are operating.

[4000]	[ ]	0	—	9%	[4006]	[ ]	60	—	69%
[4001]	[ ]	10	—	19%	[4007]	[ ]	70	—	79%
[4002]	[ ]	20	—	29%	[4008]	[ ]	80	—	89%
[4003]	[ ]	30	—	39%	[4009]	[ ]	90	—	99%
[4004]	[ ]	40	—	49%	[4010]	[ ]	Full Capacity		
[4005]	[ ]	50	—	59%					

- a) List the factors acting as constraints on optimum productive efficiency of your firm? (e.g.: [5110] Quality of labour; [5120] Vintage of technology; [5130] Quality of utility supply; [5140] Scheduling of supplies and finished goods; [5150] other).

[Optimum productive efficiency means lowest achievable average cost of goods, or services]

- b) Has decontrol/devaluation affected your investment plans and profitability?

NO 5200 YES 5300, If Yes  
[ ] [ ]

Increase Investments by	[ ]	percent	[5320]
Decrease Investments by	[ ]	percent	[5321]
Increase Profits by	[ ]	percent	[5330]
Decrease Profits by	[ ]	percent	[5331]
No Effect	[ ]		[5340]
More or Less	[ ]		[5350]

If your answer is that decontrol had an effect please provide one or two reasons why.

- a) What investments have you undertaken between liberalisation (September 1991) and 1992?

Projects	Type of Economic Activity {See Ques. 1 (a)}	Export Oriented [6130]	For Domestic Market [6140]	September 1991 to December 1992 Invested J\$M [6150]
1				
2				
3				
4				
5				

- b) **Business Intentions:**

What investment plans do you have scheduled for 1993 and 1994?

Projects	Type of Economic Activity {See Ques. 1 (a)}	Export Oriented [6230]	For Domestic Market [6240]	1993 Invested J\$M [6250]	1994 To be Invested J\$M [6260]
1					
2					
3					
4					
5					

c) What percentage of your investment funds have been and will be used for the following activities?

Activities	Sept. 1991 to 1992 Investment % of Funds	1993 Investment % of Funds	1994 Investment % of Funds
New Capacity	6311	6321	6331
Improve Productivity	6312	6322	6332
Merger or Acquisition	6313	6323	6333
Acquire Agricultural Land	6314	6324	6334

d) Please indicate the source of your financing in 1991-92 and your proposed financing for 1993-94 in terms of:

FINANCING SOURCE	FINANCING				TYPE OF INSTITUTION*	
	LOAN		EQUITY			
	(%)	(%)	(%)	(%)		
	1991/ 1992	1993/ 1994	1991 1992	1993/ 1994	1991/ 1992	1993/ 1994
1. International Institution	6411	6421	6511	6521	66 1	67 1
2. Regional Institution	6412	6422	6512	6522	66 2	67 2
3. Jamaican Institution	6413	6423	6513	6523	66 3	67 3
4. Private (Personal)	6514	6424	6514	6524	66 4	67 4
5. Retained Earnings	-	-	6515	6525	-	-
6. Other (Please specify)	6415	6425	6516	6526	66 5	67 5

\* Type of *Financing Institutions* refers to: (1) Commercial Bank, (2) Merchant Bank, (3) Jamaica Stock Exchange, (4) Development Bank, (5) 936 Funds, (6) Bi-lateral (e.g. OPIC), EX-IM Bank of the U.S.A.) etc.

What are your projected additional annual sales and employment that can be expected from the planned investments?

#### 1991/1992 Investment

#### 1993/1994 Investment

- [7011]
- 1) J\$ \_\_\_\_\_ on local market
- [7012]
- 2) US\$ \_\_\_\_\_ on export market
- [7013]
- 3) Employment \_\_\_\_\_ persons

- [7021]
- 1) J\$ \_\_\_\_\_ on local market
- [7022]
- 2) US\$ \_\_\_\_\_ on export market
- [7023]
- 3) Employment \_\_\_\_\_ persons

Which **five** of the following do **you** think are the most serious issues facing Jamaican entrepreneurs today? Please rank these issues (1 - most serious 5 - least serious).

Place the rank (1-5) under appropriate heading, leaving others blank.

- [8001] [ ] High Taxes
- [8002] [ ] Custom Procedures
- [8003] [ ] Excessive government regulation
- [8004] [ ] Low worker productivity
- [8005] [ ] High inflation
- [8006] [ ] Scarcity of equity capital

- [8007] [ ] Shortage of skilled labour  
 [8008] [ ] High interest rates  
 [8009] [ ] Uncertainties due to trade blocks – NAFTA, EC, CBI  
 [8010] [ ] Scarcity of foreign exchange  
 [8011] [ ] High utility rates  
 [8012] [ ] Infrastructure constraints  
 [8013] [ ] Problematic import and export procedures  
 [8014] [ ] Other Government related. List:

What role do you expect exports to play in the growth of your company between 1993 – 1994?

		Estimated Percentage Change (%)	
		1993	1994
Put % under appropriate heading, leaving others blank			
a. Increasing Role		[9110]	[9120]
b. Decreasing Role		[9210]	[9220]
(Please Tick Below)			
c. No Change		[9310]	[9320]
d. Uncertain		[9410]	[9420]

Thank you for participating in the U.S.A.I.D./P.S.O.J. Survey of Business Behaviour.

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## APPENDIX B: DETAILS ON STATISTICAL ANALYSIS

### Question 1 (b): Causal relationship between liberalization and Investments<sup>5</sup>

$$\text{Test Statistic: } Z = \frac{(\text{Av. Inv.'93} - \text{Av. Inv.'91/92})}{\text{Std. Dev. Sampling Distr.}}$$

Firm Size **	Ave. '91/92 Investment (J\$ Million)	Average '93 Investment (J\$ Million)	Std. Dev. Samp Dist.	Z	Z <sub>0.05</sub>
Small	6.39	12.01	2.77	2.03	1.645
Medium	11.69	6.65	5.84	-0.86	1.645
Large	40.59	49.12	20.36	0.45	1.645

\* Z<sub>0.05</sub> is a one-tailed test of whether the difference in average investment is significantly greater than zero at a level of 95% confidence.

\*\* Small: < 50 employees; Medium: 50 - 199 employees; Large: > 200 employees.

For small firms liberalization appears to have increased confidence in investments since  $Z > Z_{0.05}$ . However, for other types of firms attitudes towards investments are not significantly related to liberalization, which occurred between 1991 and 1992.

These results are supported by responses to Question 5 (b).

(See Table B.1) which follows for more sample statistics).

**Table B.1: Sample Statistics on Investments  
(Sample Disaggregates by Firm Size)**

	Average '91/92 Invest. (J\$ Mil)	Average '93/94 Invest. (J\$ Mil)	Variance '91/92	Variance '93/94	Standard Dev. '91/92	Standard Dev. '93/94	No. of Firms '91/92	No. of Firms '93/94	Std. Dev. Samp. Mean (Samp. Dist.)
Small Firms	6.39	12.01	259.76	104.14	16.12	10.20	51	40	2.77
Medium Firms	11.69	6.65	273.04	649.57	16.52	25.49	30	26	5.84
Large Firms	40.59	59.12	2,926.01	8,470.35	54.09	92.03	29	27	20.36

<sup>5</sup> The analysis was done using data from the responses to questions 6(a) and (b). It examines **INVESTMENT CONFIDENCE**, since it is planned investments which are being compared with actual '91/92 investments.

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