

# BUDGETARY BENCHMARKS FOR STATISTICS IN SMALL ECONOMIES

- I. Introduction
- II. Resource Levels in  
Caribbean Countries
- III. Resource Levels in Other  
Countries
- IV. Conclusions

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# OBJECTIVE OF THE CONFERENCE

- Promote awareness of the importance of statistics
- Case of increased funding of statistical activities

# CONSTRAINT IN DEVELOPING EFFECTIVE STATISTICAL SYSTEMS

- Lack of adequate resources (category 0.2 of the DQAF)
  - Staff
  - Facilities
  - Computing resources
  - Financing
- Issue relates mainly to NSOs and MoFs

# LEVEL OF FUNDING?

- Minimum Efficient Scale
  - In countries with a population size of about 4 million
- Some Statistical Systems in the Caribbean countries appear to be underfunded
  - Allocation of budget shares from central governments to statistical activities is close to the level observed in countries at or beyond the minimum efficient size

# SURVEYS ON RESOURCES IN CARIBBEAN COUNTRIES

- Organization of Caribbean States Discussion Paper
  - Associated survey that report on resources availability in the Caribbean countries in 2005
- Eastern Caribbean Currency Union members survey
  - Undertaken by the ECCB in 2005
- **SURVEYS PAINT A PICTURE OF SMALL SIZE AND CONSTRAINED RESOURCES**

Table 1. Staffing of Statistical Agencies

	AI	AG	AW	BS	BB	BZ	BM	VG	KY	DM	GD	GY	JM	MS	AN	KN	LC	VC	SR	TT	TC	VI	Total	
<b>Degree</b>	3	5	20	42			14		6	4	5		64	3	22	4	8	7			9	6	222	
<b>With subject matter training</b>	3	3	12	27			14		6	4	5		63	3	22	4	8	4			4	2	184	
Male		1	7	5			9		3		2		15		9	2	5	1			1	1	61	
Female	3	2	5	22			5	3	4	3			48	3	13	2	3	3			3	1	123	
<b>Without subject matter training</b>		2	8	15									1					3				4	38	
Male		1	3										1					1			1	1	8	
Female		1	5	15														2			4	3	30	
<b>Nondegree</b>	3	37	13	47			7		5	9	30		274	3	8	10	34	9					489	
<b>With subject matter training</b>	3	37	11	8			4		3	7	4		231	2	8	3	13	4					338	
Male		8	5				2			4	2		69		5	1	3	3					102	
Female	3	29	6	8			2		3	3	2		162	2	3	2	10	1					236	
<b>Without subject matter training</b>			2	39			3		2	2	26		43	1		7	21	5					151	
Male				7					1		10		7			2	5	2					34	
Female			2	32			3		1	2	16		36	1		5	16	3					117	
<b>Total</b>	6	42	33	89	71	28	21	27	11	13	35	121	338	6	30	14	42	16	92	220	9	6	711	
<b>With subject matter training</b>	6	40	23	35			18		9	11	9		294	5	30	7	21	8			4	2	522	
Male		9	12	5			11		3	4	4		84		14	3	8	4			1	1	163	
Female	6	31	11	30			7		6	7	5		210	5	16	4	13	4			3	1	359	
<b>Without subject matter training</b>		2	10	54			3		2	2	26		44	1		7	21	8				4	189	
Male		1	3	7					1		10		8			2	5	3			1	1	42	
Female		1	7	47			3		1	2	16		36	1		5	16	5			4	3	147	
<b>Percent with degrees</b>	50	12	61	47			67		55	31	14		19	50	73	29	19	44					100	199
<b>Percent with subject matter training</b>	100	95	70	39			86		82	85	26		87	83	100	50	50	50					44	
<b>Percent female</b>	100	76	55	87	59	43	48	67	64	69	60	80	73	100	53	64	69	56		55	78			
<b>Staff/1,000 population</b>	.50	.53	.33	.28	.27	.11				.17	.35	.16	.13		.17	.35	.26	.10		.17				

<b>AI</b>	Anguilla	<b>BM</b>	Bermuda	<b>JM</b>	Jamaica	<b>SR</b>	Suriname
<b>AG</b>	Antigua and Barbuda	<b>VG</b>	British Virgin Islands	<b>MS</b>	Montserrat	<b>TT</b>	Trinidad and Tobago
<b>AW</b>	Aruba	<b>KY</b>	Cayman Islands	<b>AN</b>	Netherlands Antilles	<b>TC</b>	Turks and Caicos Islands
<b>BS</b>	Bahamas	<b>DM</b>	Dominica	<b>KN</b>	St. Kitts/Nevis	<b>VI</b>	US Virgin Islands
<b>BB</b>	Barbados	<b>GD</b>	Grenada	<b>LC</b>	St. Lucia		
<b>BZ</b>	Belize	<b>GY</b>	Guyana	<b>VC</b>	St. Vincent and the Grenadines		

CARICOM: Caribbean Community; CSO: Central Statistical Office; ECCB: East Caribbean Central Bank; ECLAC: Economic Commission for Latin America and the Caribbean; OECS: Organisation of Eastern Caribbean States.

Table 2. Available Equipment and Equipment Required in Statistics Offices in the Caribbean

<b>Equipment Available</b>	AI	AG	AW	BS	BM	KY	DM	GD	JM	MS	AN	KN	LC	VC	TC	VI	Total
Computers	8	19	28	87	26	14	12	16	139	7	35	14	29	8	10	8	460
Internet connections	6	6	21	21	19	14	5	10	50	7	31	1	28	1	8	8	236
Printers	3	5	3	15	16	4	3	6	16	7	9	4	9	3	9	6	118
Scanning equipment	3	2	3	3	2	2	1	1	2	2		1	1	1	1	1	26
Photocopiers	1	1	1	4	2	1		1	1	1	39		1		1	1	55
Calculators	5	8	28	52	8	14	11	10		1	31	4	17	2		10	201
Computers/Staff	1.33	1.33	0.85	0.98	1.24	1.27	0.92	0.46	0.41	1.17	1.17	1.00	0.69	0.50	1.11	1.33	0.65
<b>Equipment Required</b>																	
Computers	8	33	28	87	26	14	16	16	156	7	39	16	35	13	10	8	512
Internet connections	1	11	21	21	19	14	5	10	50	7	31	1	28	1	8		228
Printers	3	10	3	4	16	4	6	6	16	7	7	6	9	6	10	6	119
Scanning equipment	3	6	3	2	2	2	1	1	4	2	1	1	1	1	1	1	32
Photocopiers	1	2	1		2	1	1	1	1	1	5		1	1	1	1	20
Calculators	5	10	28	52	8	14	11	10		1	20	4	17	2		10	192
Computers/Staff	1.33	0.79	0.85	0.98	1.24	1.27	1.23	0.46	0.46	1.17	1.30	1.14	0.83	0.81	1.11	1.33	0.72
Percent increase in computers		74					33				11	14	21	63			11

□

<b>AI</b>	Anguilla	<b>BM</b>	Bermuda	<b>JM</b>	Jamaica	<b>SR</b>	Suriname
<b>AG</b>	Antigua and Barbuda	<b>VG</b>	British Virgin Islands	<b>MS</b>	Montserrat	<b>TT</b>	Trinidad and Tobago
<b>AW</b>	Aruba	<b>KY</b>	Cayman Islands	<b>AN</b>	Netherlands Antilles	<b>TC</b>	Turks and Caicos Islands
<b>BS</b>	Bahamas	<b>DM</b>	Dominica	<b>KN</b>	St. Kitts/Nevis	<b>VI</b>	US Virgin Islands
<b>BB</b>	Barbados	<b>GD</b>	Grenada	<b>LC</b>	St. Lucia		
<b>BZ</b>	Belize	<b>GY</b>	Guyana	<b>VC</b>	St. Vincent and the Grenadines		

**CARICOM**: Caribbean Community; **CSO**: Central Statistical Office; **ECCB**: East Caribbean Central Bank; **ECLAC**: Economic Commission for Latin America and the Caribbean; **OECS**: Organisation of Eastern Caribbean States.

Table 3. ECCU Countries: Budget Allocation to Statistical Agencies

	Current Expenditure in Percent of Central Government Current Expenditure (2005)
(In percent)	
<b>Average</b>	<b>0.24</b>
Anguilla	0.26
Antigua and Barbuda	0.11
Dominica	...
Grenada	0.26
Montserrat	...
St. Kitts and Nevis	0.02
St. Lucia	0.55
St. Vincent and the Grenadines	...
Source: ECCB and IMF.	

□

# IMF STAFF SURVEY

- Small number of selected countries
- Surveyed countries ranged in the population size from Canada to Seychelles
- Countries with a high level of statistical developments and those countries with less developed statistical systems
- Countries of different geographic sizes

# Identification of Minimum Efficient Scale

- NSO current expenditure per 1,000 population
- Share of government expenditure dedicated to the statistics agency
- Staff of statistical agency per thousand of population

Table 4. Resources and Scale of Operations in National Statistical Agencies

2005

(In thousands (000) of U.S. dollars, where applicable)

	Canada (32,271)	Australia (20,310)	Jordan (5,544)	New Zealand (4,097)	Mauritius (1,241)	Malta (403)	Iceland (296)	Seychelles (86)
(Population in 1000)								
Annual current expenditure budget (ACLB)	336,234	188,949	1,423	46,364	1,736	3,033	8,923	676
Salary	271,288	140,779	1,197	26,129	1,078	2,639	6,646	364
Nonsalary	63,946	48,170	226	20,235	657	394	2,278	212
Annual capital expenditure budget	2,843	21,295	1,611	8,466	226	-	169	72
ACLB per capita (in U.S. dollars)	10.50	9.00	0.24	11.07	1.40	7.50	30.77	7.82
ACLB/central government operating exp. in percent	0.19	0.12	0.16	0.13	0.13	3.11	0.42	0.17
Share of ACLB allocated to surveys				37,407		4.41		123
Number of permanent staff	6,601	2,848		771	144	141	81	41
Male	2,626	1,462		377	66	61	36	14
Female	2,875	1,386		394	79	80	46	27
Number of permanent staff with degree	2,667			664	63	49	67	3
Specialized degree (statistics)				60	39	6	67	2
Male				24	24	2	30	1
Female				26	16	4	27	1
Number of permanent staff without degree	2,934			117	81	92	24	38
Number of PCs/laptops in use	7,289	4,306	280	1,460	97		106	46
Number of PCs with Internet access	3,340	4,306	114	1,460	36		106	42
Number of staff with indiv. e-mail address	6,601	2,848	180	1,120	66		81	41
Local area network in use?	yes	yes	yes	yes	yes		yes	yes
Number of staff with access	6,601	2,848	266	1,120	60		81	41
Offsite backup available	no	yes		yes	yes		no	yes
Permanent staff/1000 population in percent	.17	.14		.19	.12	.36	.27	.48
Ratio of computers to permanent staff in percent	132.6	161.2		189.4	67.4		129.6	109.8
Ratio of PCs with Internet access to permanent staff in percent	60.7	161.2		189.4	24.3		129.6	102.4
Ratio of per. staff with degree to permanent staff in percent	46.7			84.8	43.8	34.8	70.4	7.3
Ratio of male to permanent staff in percent	47.7	51.3		48.9	46.1	43.3	43.2	34.1
Total number of data series collected	389							8
Total number of data series published	1,200							18

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Table 5. Resources and Scale of Operations in National Statistical Agencies  
2006  
(In thousands (000) of U.S. dollars, where applicable)

(Population in 000)	Canada	Australia	Jordan	New Zealand	Mauritius	Malta	Iceland	Seychelles
	(32,577)	(20,530)	(5,729)	(4,140)	(1,252)	(405)	(298)	(86)
Annual current expenditure budget (ACEB)	409,399	218,210	1,469	57,460	1,637	3,469	8,719	832
Salary	286,535	150,807	1,242	36,756	1,014	3,356	6,572	483
Nonsalary	22,864	67,403	225	20,704	623	113	2,147	349
Annual capital expenditure budget	7,564	29,527	1,487	9,254	227	-	154	25
ACEB per capita (in U.S. dollars)	12.82	11.53	0.25	13.88	1.31	8.57	30.07	10.18
ACEB/central government operating exp. in percent	0.23	0.14	0.15	0.16	0.13	3.14	0.42	0.26
Share of ACEB allocated to surveys				41,468	0.26	7.17		170
Number of permanent staff	5,348	3,669	412	886	153	137	84	44
Male	2,543	1,624	319	430	68	58	36	12
Female	2,805	2,045	93	456	85	79	48	32
Number of permanent staff with degree	2,510	1,645	412	717	74	50	61	4
Specialized degree (statistics)		1,645	23	52	44	6	61	3
Male		848	15	25	23	2	30	1
Female		797	8	27	21	4	31	2
Number of permanent staff without degree	2,838	642		169	79	87	23	40
Number of PCs/laptops in use	8,288	5,195	313	1,592	113	170	110	49
Number of PCs with Internet access	3,795	5,195	69	1,592	43	23	110	45
Number of staff with indiv. e-mail address	5,348	3,669	207	1,249	66	130	84	44
Local area network in use?	yes	yes		yes	yes	yes	yes	yes
Number of staff with access	5,348	3,669	296	1,249	60	130	84	44
Offsite backup available	no	yes		yes	yes	yes	yes	yes

□

(Population in 000)	Canada	Australia	Jordan	New Zealand	Mauritius	Malta	Iceland	Seychelles
	(32,577)	(20,530)	(5,729)	(4,140)	(1,252)	(405)	(298)	(86)
Permanent staff/000 population in percent	.16	.18	.07	.21	.12	.34	.28	.51
Ratio of computers to permanent staff in percent	155.0	141.6	76.0	179.7	73.9	124.1	131.0	111.4
Ratio of PCs with Internet access to per. staff in percent	71.0	141.6	16.7	179.7	28.1	16.8	131.0	102.3
Ratio of per. staff with degree to permanent staff in percent	46.9	44.8	100.0	80.9	48.4	36.5	72.6	9.1
Ratio of male to permanent staff in percent	47.6	44.3	77.4	48.5	44.4	42.3	42.9	27.3
Total number of data series collected	391							8
Total number of data series published	1,200							18
Total number of surveys conducted in 2006								
Monthly	361			11	4	19	20	
Quarterly	32		1	95		9	10	
Annual	265		2	27	1	13	25	
Other frequency	64		2	10	3	2	a few	
Producer prices survey - frequency	Monthly	Quarterly	Monthly	Quarterly	Monthly	Monthly	Monthly	Monthly
- sample size	3,000		303	3,000	100	80		
Consumer prices survey - frequency	Monthly	Quarterly	Monthly	Quarterly	Monthly	Monthly	Monthly	Monthly
- sample size	600	3,000	381	5,600	6,000	8,700	460	30
Labor force survey - frequency	Monthly	Monthly	Quarterly	Quarterly	Continuous	Quarterly	Continuous	Quinquennial
- sample size	103,000	38,500	10,000	15,000	11,280	3,200	4,020	5%
Census of population and housing - frequency	Quinquennial	Quinquennial	10 years	Quinquennial	10 years	10 years	Continuous	10 years
- sample size	13 million	100% every 5 years		4,143,279	100%	100%		100%
Household income and expenditure survey - frequency	Annually		Annually	Three-yearly	Quinquennial	Annually	Continuous	Quinquennial
- sample size	21,000		13,000	4,500	6,720	3,400	1,200	5%
Business/enterprise survey - frequency	Various	Annually	Annually	Annually	Monthly	Annually	Annually	
- sample size		16,000	16,000	22,000	90	1,078	600	
Investment survey - frequency	Quarterly	Quarterly	Ad hoc	Quarterly	Annually	Annually		
- sample size		960	350	500	300	4,000		

# CONCLUSIONS

- There appears to be some evidence of economies of scale in production of national statistics
- Resources for statistics in Caribbean countries may lag somewhat behind what is observed in other parts of the world
  - Especially when account is taken of the small populations in many Caribbean countries