



# **FORECASTED SKILLS SHORTAGES IN SEVEN KEY ECONOMIC SECTORS WITHIN TRINIDAD AND TOBAGO**

**Identifying Strategies for Ensuring an Adequate Supply of  
Labour in T&T**

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## **1.0 INTRODUCTION**

“The unemployment rate in Trinidad and Tobago during the third quarter of 2007 was 5.2%, representing a continuing decline in unemployment in the country. While the situation presents a very positive scenario, it has, precipitated labour shortages. The position is that skilled labour, particularly in the Construction and Hospitality sectors, but also to a significant extent in several other areas of the economy, is extremely difficult to secure.

In this view, the Prime Minister considers it now essential that urgent steps be taken to identify sources from which required skills may be obtained in order to ensure that the rate of development on which the Government has embarked, is sustained.”

The National Training Agency is the Central Coordinating Agency for all Technical and Vocational Education and Training (TVET) in Trinidad & Tobago. As part of its mandate the agency continually assesses and provides relevant information on TVET and workforce development, which includes the demand for and supply of human resources in collaboration with state and other agencies.

## **2.0 OBJECTIVES**

The aim of this document is to compile data from previous surveys and censuses, use economic and statistical information from other agencies and make scientific projections on the current and future labour market requirements within Trinidad and Tobago.

The NTA has produced National Skills Needs Survey Report for the period 2005-2010, which identified the occupational areas and their respective labour shortages.

The approach of this study was to determine the occupational distribution of the population for all sectors of the economy of Trinidad and Tobago and forecast the demand for selected occupations over a three years period 2008-2010.

## **3.0 METHODOLOGY**

From the Central Statistical Office (CSO) Census in 2000, 2,831 different occupational types were identified. The number of persons in each occupation based on the 2000 Census (as the base year) was then used to make conservative projections for each occupational area up to 2010.

The **Auto Regressive Integrated Moving Average** (ARIMA) model was then used to forecast the real GDP growth up to 2010. The ARIMA model uses time series data i.e. present and past behaviours of the GDP as the key variable, to better understand the data and so predict future points in the series. It is the most widely used tool in giving an indication as to how the variable will behave in the future.

#### 4.0 CONSIDERATIONS/CONSTRAINTS

The information provided by this form of forecasting can be used for the purpose of planning and developing the nation's human resources and by extension its labour force. It should be noted that the shortages projected did not take into account the current supply side of the labour market i.e. the number of persons trained and certified and absorbed within the respective sectors (see appendix 2).

The projections for the Agricultural sector did not incorporate the shrinking and restructuring of the sugar industry, the dissolution of Caroni (1975) Limited and the award of small-scale farms to former Caroni workers to assist with domestic food production. Other developments in the arena of international trade, which have also added to the current agricultural problems of reduced capacity, production, exports, income, profitability and competitiveness impact upon the preciseness of the projections for this sector. However, the Government has proposed a number of actionable measures to revitalize this sector, which will create a demand for labour.

Several additional projects have been scheduled, towards the level of development on which the Government has embarked, after the time in which these projections were calculated. Therefore, these figures can also be used as a conservative guide to the skills shortage in T&T. Examples of these projects are listed in Appendix 1.

Furthermore, the Government of Trinidad and Tobago and the Ministry of Trade and Industry has identified seven non-energy industries for development and expansion on the basis that they can achieve substantial and continuous growth. These industries will further influence the skills projections listed in this report.

The Labour Force Participation rate in Trinidad & Tobago is currently 63.9 percent. For most developed countries, this rate varies from 75% to just over 80%. Barbados is currently at 80%.

Year	Non-Institutional population over 15 years old	Total labour force	Number employed	Number unemployed	Labour force participation rate	Unemployment rate
					(2) ÷ (1)	(4) ÷ (2)
(Hundreds '00)						
	(1)	(2)	(3)	(4)	(5)	(6)
1996	8 767	5 304	4 442	861	60.5	16.2
2000	9 362	5 729	5 034	696	61.2	12.1
2004	9 736	6 134	5 623	511	63.0	8.3
2006	9 785	6 253	5 863	390	<b>63.9</b>	6.2

## 5.0 RESULTS

The appendices 2 through 8, identifies key occupational areas that have shortages. The following is a summary by sector and identifies the percentage

<b>SECTOR \ CATEGORY</b>	<b>SEMI SKILLED</b>	<b>SKILLED</b>	<b>TECHNICAL</b>	<b>PROFESSIONAL</b>	<b>TOTAL SHORTAGE</b>
<b>Construction</b>	6 952	15 543	845	269	<u>23 609</u>
<b>Personal Services</b>	11 701	5 643	1 749	1 153	<u>20 246</u>
<b>Distribution</b>	7 881	5 208	1 562	823	<u>15 474</u>
<b>Agriculture</b>	3 249	4 299	0	189	<u>7 737</u>
<b>Tourism and Hospitality</b>	2 309	2 550	1 029	256	<u>6 144</u>
<b>Manufacturing</b>	1 750	2 775	502	51	<u>5 078</u>
<b>Financial Services</b>	269	581	1 115	1 248	<u>3 213</u>
<b>Total</b>	<u>34 111</u>	<u>36 599</u>	<u>6 802</u>	<u>3 989</u>	<b>81 501</b>
<b>Percentage of Total</b>	41.85%	44.9%	8.35%	4.9%	

The occupational areas in which skills shortages were projected have been identified for each sector (see Appendices 2 – 8). The corresponding Level is according to the Regional Vocational Qualifications Framework for each of occupational area. (see Appendix 10 for the Regional Vocational Qualifications Framework).

<b>Sector</b>	<b>Areas of Shortages / Sub-sectors</b>
Construction	Building construction and repair, Civil engineering, Plumbing installation, Painting and Decorating, General construction and contracting, Trade contracting
Tourism & Hospitality	Hotels, Guest houses, Bed & Breakfasts, Other rooming establishments, Bars
Manufacturing	Construction materials, Food, Beverage, Plastic, Jewelry, Miscellaneous, Boat Building, Assembly and repairs (appliances and air conditions), repair industrial machines/machine shops, Metal Building materials, Mufflers/radiators, glass and glass products, wooden furniture
Distribution	Retail and wholesale trading, Driving, Construction material and hardware, Food, drink and tobacco, Household appliances, Machinery and equipment, Computers, Supermarkets, Textiles, Fast-food restaurants
Personal Services	Barbering, Beauticians, Tailoring, Dressmaking, Medical and Dental Technicians, Opticians/Optometrists, Recreation services, Miscellaneous repairing
Financial Services	Insurance Agencies, Commercial Banks, Merchant Banks, Finance Companies, Credit Unions
Agriculture	Meat processing, Citrus processing, Fish processing, Grain processing, Baking, Confection and Snack foods, Breweries

## **6.0 STRATEGIES TO ALLEVIATE SKILLS SHORTAGE**

There is need to identify strategies which will enable Trinidad and Tobago to have a readily available adequate supply of labour to meet existing demands and to ensure that national development objectives are achieved.

<b>STRATEGIES TO ALLEVIATE THE SKILLS SHORTAGE IN T&amp;T</b>	
<b><u>First Option: Attract new persons into the formal economy / sustainable labour force</u></b>	
1.	Retirees
2.	Differently abled
3.	Job placement for Government Social Programmes i.e. URP, MuST etc.
4.	Bus persons from areas of “higher unemployment” e.g. Tabaquite, Toco, Cedros
5.	Retrenched/Displaced Workers
6.	National Drive to identify the unemployed – increasing the LF participation rate
7.	Apprenticeship programmes for school students leaving Secondary Schools
8.	Importation of Labour - The free movement of Artisan workers throughout CSM
<b><u>Second Option: “Upskilling” the Workforce – Require less manual labour</u></b>	
1.	Certification of workers with CVQ to ascertain the level of the workforce
2.	Apprenticeship Programmes within workplace through a seamless TVET system
3.	Retraining of workers / unemployed
4.	Secondary Schools Evening/Part Time Training Programmes within communities

**Additional Recommendations from the NTA  
for the Technical Committee Report / Cabinet Approval**

**MANDATE OF THE NTA:**

The NTA is the Central Coordinating Agency for all Technical and Vocational Education and Training (TVET) in Trinidad & Tobago. Its mandate is:

- i. To develop, implement and maintain a National Training Plan for TVET that will create a workforce that is competent, innovative, enterprising and entrepreneurial.
- ii. To establish and maintain a National Training System to harmonize, standardize, monitor and evaluate all formal and non-formal national training efforts in TVET.
- iii. To continually assess and provide relevant information on TVET and workforce development, which includes the demand for and supply of human resources in collaboration with state and other agencies
- iv. To assist, support and encourage the development of training programmes designed to develop innovation, enterprise and entrepreneurship in the nation's human resources.
- v. To develop a structured and active system of communication and partnership with stakeholders to ensure continued relevance and value of the Agency's products and services.

**NTA & MANPOWER PLANNING**

Trinidad and Tobago must ensure proper manpower planning in preparing its workforce to adapt to the new and changing economy within the globalized environment. Most developed countries (such as Sweden, Australia, Singapore, US, Canada & Finland etc.) have instituted a national system of Registration, Certification and Licensing of workers through legislation. Such a system has benefited nations so that proper tracking of the workforce, training & re-training of workers and emergence of new industries becomes easier to manage and implement. The system of National service will also supplement and raise skill level as part of a broader strategy. The NTA as part of its mandate recommends for approval such systems.

***1. Registration, Certification & Licensing of Workers through Legislation:***

**(a) SYSTEM OF REGISTRATION:**

A number of disparate bodies continue to maintain its own registration system as part of its programme implementation. The largest of these systems include but not restricted databases kept by:

- i. National Employment Service – Ministry of Labour
- ii. On-the-job Training Programme – Ministry of STTE
- iii. MuST Programme – Ministry of STTE
- iv. YTEPP – Ministry of STTE

- v. National Apprenticeship Programme – NTA
- vi. CEPEP – Ministry of Planning, Housing and the Environment
- vii. Unemployment Relief Programme (URP) – Ministry of Works
- viii. Community Skills Training Programmes – Ministry of Community Development
- ix. MILAT / MYPART – Ministry of National Security
- x. YAPA – Ministry of Agriculture
- xi. UWI
- xii. UTT
- xiii. Private Sector Bodies.

**ISSUES:**

- The common link between these bodies continues to be Government's financing arrangements through its Ministries and with systems such as GATE.
- One of the major problems with the current system is that persons have been leaving one programme and entering others making little impact on the workforce i.e. in the case of training programmes causing a system of “perpetual trainees” and thus keeping potential workers outside of the formal workforce.
- An immediate measure will be for one agency to collate all information currently stored by disparate programmes/bodies.
- A new focus by Government should be on a centralized system – A National Labour Market Information System as recommended by the National Labour Market Council and the Vision 2020 Implementation Plan.
- Certification may not be a pre-requisite for registration.
- This strategy also requires Government's support and can become fruition in the short to medium term.



## (b) SYSTEM OF CERTIFICATION:

The NTA currently seeks to rationalize all training programmes to industry set occupational standards. With the registration process implemented, a national certification drive can be effectively implemented through assessment of workers who do not possess recognized certification i.e. the Caribbean Vocational Qualification (CVQ).

### ISSUES

- CARICOM, through the efforts of the Council of Human and Social Development (COHSOD) has approved a Regional Workforce Development System through the implementation of the Caribbean Vocational Qualifications (CVQs). This will benefit the region as it will seek to rationalize all existing vocational qualifications through CARICOM approved industry-developed occupational standards. This will aid in the recognition and mobility of workers throughout the Caribbean.
- Trinidad & Tobago, through its Ministry of Education has already completed a first phase of implementing the CVQs within the secondary school system, in partnership with the local National Training Agency (NTA) and the Caribbean Examinations Council (CXC).
- The National Training Agency is now preparing to launch the CVQs within the workplace (primarily through apprenticeships and training providers), and will incorporate a Prior Learning Assessment and Recognition System (PLAR) for the assessment of all artisan workers. PLAR is a system designed to give credit to a candidate's knowledge, skills and attitudes (KSA) that they may have acquired through both the formal and informal system of education and training. Workers must present evidence of meeting the occupational standards set by CARICOM in order to become certified. Those persons who are not yet competent, will be given Unit Awards and skills gaps will be identified.
- A successful implementation of this plan will require Government's support and will be a medium to long term strategy.

### (c) SYSTEM OF LICENSING:

Licensing of workers has been used as part of the recognition within the hierarchical structure of artisans and technical workers by instituting laws, regulations and policies. Licensing is used where a higher level of performance and knowledge is required for certain occupations and completes the system for registration, certification and licensing. Although only certain occupational areas require licensing, it is only after a number of pre-determined years of experience after certification that an assessment authority for the occupation allows licensing. At present only Plumbers and Electricians are licensed artisan trades in Trinidad and Tobago.

#### ISSUES:

- One of the major elements of Licensing worldwide is the element of quality but moreso as a measure of control and restricting competition.
- With the importation of workers, both internationally and regionally, licensing of local workers to take up key jobs is one strategy that T&T can use to ensure local content and also regulate the profile of the workforce. This strategy cannot be looked at by itself but within the entire system of certification, registration and licensing.
- Legislation will have to be passed as part of a medium to long term strategy.

### ***2. Implementation of a System of National Service through work-based apprenticeships in partnership with industry***

National Service is generally used to define a policy for involuntary labor demanded by national bodies, but it is most often used in the specific sense of government policies that require citizens to serve within controlled environment such as in training, work or in the defense force. More apprenticeship-type training should be implemented.

## Appendix 1: New Investments in T&T

<b>MANPOWER REQUIREMENTS FOR NEW INVESTMENTS PROJECTS IN T&amp;T</b>			
<b>PROJECT</b>	<b>Investment</b>	<b>Construction Phase Jobs</b>	<b>Permanent Jobs</b>
Shanghai Construction Group, Social Development Towers	US\$60 million	-	-
Helmuth Obata & Kassabaum. HOK architectural firm - Design of the Brian Lara Academy at Tarouba	US\$500,000	-	-
Building of a new Port Facility	-	-	-
Large Agricultural Farms Project (10)	-	-	-
Johnston International, multi-storey car park and retail complex	US\$28 million	-	-
Sunway Construction Caribbean - Government Campus for Ministry of Legal Affairs	US\$60 million	-	-
Bouygues Batiment International – Construction Services	US\$265 million	-	-
Johnston International - Chancery Lane Complex	US\$50 million	-	-
Waterfront International Development Project	-	-	-
China Jiangsu - 3 housing contracts	\$US12 million	-	-
MHTLAUM (UAN/Melamine)	-	-	300
First UAN (Ammonium/UAN)	-	2000	125
Alutrint Aluminium Smelter / Downstream	-	3000	1050
Alcoa Smelter / Downstream	-	2500	800
Essar Steel / Downstream	-	6000	1225
GTTP	-	4000	400
Westlake Ethylene Complex	-	5000	500
<b>Seven (7) industries for growth and development</b>			
Yachting	-	-	-
Fishing & Fish Processing	-	-	-
Merchant Marine	-	-	-
Music & Entertainment	-	-	-
Printing & Packaging	-	-	-
Food & Beverage	-	-	-
Film	-	-	-

**APPENDIX 2: SUPPLY SIDE STATISTICS**

<b>“Formal” Training Institutions</b>	<b>Estimated Output 2008</b>	<b>LEVEL</b>
Secondary School 60%	13,250	1
NESC**	8,000	1 & 2
YTEPP**	4,500	1 & 2
COSTAATT	1,200	3
UWI – SCS**	846	1 & 2
Servol	525	1
HYPE	490	1 & 2
TTHTI	300	2, 3 & 4
MIC / NSDP	150	1 & 2
UWI	3,000	4 & 5
UTT	1,800	3, 4 & 5
Distance Learning	1,200	3, 4 & 5
<b>Sub-Total</b>	<b>35,265</b>	

<b>“Social” Programmes</b>	<b>Estimated Output 2008</b>	<b>LEVEL</b>
MoW - URP	18,000	1
MoCD – Comm Skills	13,000	1
MSTTE - OJT	10,000	2, 3 & 4
MSTTE - MuST	8,000	1 & 2
MoP – CEPEP	7,750	1
MSTTE - Retraining	3,200	1
MoNS - CCC	1,800	1
MoCD - GAPP	800	1
MoA - YAPA	800	1
NTST for Women	720	1
MoNS - Prisons	75	1
<b>Sub-Total</b>	<b>64,145</b>	
<b>TOTAL</b>	<b>99,410</b>	

### Appendix 3: Construction

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
1	LABOURER, CONSTRUCTION	20048	24171	28462	4291
2	CARPENTER	6243	6712	9209	2497
2	WELDER	8238	9450	11901	2451
2	MASON	9500	12255	14431	2176
2	DRIVER, TRUCK	4733	5088	6850	1762
1	CONSTRUCTION AND MAINTENANCE LABOURERS, ROADS, DAMS AND SIM	7968	9607	11312	1705
2	ELECTRICAL WIREMAN	3499	3762	5315	1553
2	JOINER	3362	3614	4865	1251
2	PAINTER, BUILDING	2213	2379	3310	931
2	PLUMBER	1787	1921	2591	670
2	DRIVER, HEAVY VEHICLE	1501	1613	2172	559
2	PIPEFITTER	1307	1405	1892	487
3	BUILDING CONTRACTOR	1257	1352	1819	467
2	INSTALLER, ELECTRICAL	1901	2292	2699	407
2	SUPERVISOR-FOREPERSON, CONSTRUCTION SITE PREPARATION	1585	1911	2250	339
2	OPERATOR, HEAVY DUTY EQUIPMENT	699	751	1012	261
2	CRANE OPERATOR	516	555	760	205
2	DRIVER, FORK LIFT TRUCK	732	882	1039	157
2	METAL FABRICATOR	648	782	921	139
2	STEEL BAR BENDER AND BINDER	593	715	842	127
2	ELECTRICIAN, INDUSTRIAL	538	649	764	115
4	ENGINEER, MECHANICAL	488	588	693	105
3	TECHNICIAN, ELECTRICAL ENGINEERING	478	577	679	102
3	DRAUGHTER	393	477	561	84
3	DRAUGHTSPERSON	331	399	469	70
4	ENGINEER, ELECTRICAL	327	395	465	70
2	SETTER, TILE	309	373	439	66
4	ENGINEER, CIVIL	295	356	419	63
2	OPERATOR, BACK-HOE	275	332	390	58
2	ROOFER	263	317	374	57
3	SUPERVISOR, CONSTRUCTION	259	312	368	56

<b>Required Level</b>	<b>Description</b>	<b>CSO CENSUS 2000 - ACTUAL</b>	<b>Projected Actual Number of Workers 2007</b>	<b>Projected Required Number of Workers 2008-2010</b>	<b>SHORTAGES</b>
2	SUPERVISOR-FOREPERSON, BUILDING TRADES	220	266	313	47
2	METAL SCAFFOLDING ERECTOR	192	231	272	41
3	ASSISTANT, ENGINEERING	175	212	249	37
2	SANDBLASTER	167	201	237	36
2	OPERATOR, MISC.	157	190	224	34
4	ARCHITECT	143	173	204	31
3	TECHNICIAN, CIVIL ENGINEERING	139	168	197	29
2	OPERATOR, CRANE BARGE	131	157	185	28
1	CHAINMAN	117	141	166	25
2	INSULATOR	90	108	128	20

**TOTAL: 23 609**

#### Appendix 4: Tourism and Hospitality

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
1	CLEANER	5853	7056	8309	1253
2	COOK	3649	4399	5180	781
1	JANITOR	2436	2937	3459	522
2	WAITRESS	1917	2312	2722	410
2	BARTENDER	1560	1881	2215	334
3	CATERER	1484	1789	2107	318
2	CUSTOMER SERVICE REPRESENTATIVE	1476	1779	2095	316
1	KITCHEN ASSISTANT	1403	1691	1991	300
3	CHEF	1220	1471	1732	261
3	BAR OWNER	1130	1362	1604	242
2	BAKER	923	1113	1311	198
2	CASHIER, CUSTOMER SERVICE	654	788	928	140
4	MANAGER, RESTAURANT, FAST FOOD & CATERING SERVICE	529	637	750	113
2	HANDICRAFT	514	619	729	110
4	MANAGER, SUPERMARKET	505	609	717	108
1	BAGGAGE PORTER	408	492	579	87
2	ATTENDANT, FLIGHT	378	455	536	81
2	CHAUFFEUR	348	419	494	75
1	CHAMBER MAID	303	365	430	65
3	MUSICIAN	292	352	415	63
1	LAUNDRY CHECKER	281	339	400	61
3	PHOTOGRAPHER	282	341	401	60
2	WAITER	228	275	324	49
3	AGENT, TRAVEL	227	273	322	49
3	SUPERVISOR, RESTAURANT	167	201	237	36
4	MANAGER, HOTEL	166	200	235	35
2	SUPERVISOR, FOOD AND BEVERAGE MANUFACTURE	142	172	202	30
2	CHEF, ASSISTANT	120	144	170	26
1	CASINO DEALER	96	116	137	21

**TOTAL: 6 144**

## Appendix 5: Manufacturing

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
2	CLERK, PRODUCTION	4734	5707	6720	1013
1	LABOURER, MANUFACTURING	4602	5548	6533	985
2	WOODEN BOAT BUILDER	4095	4937	5813	876
1	PACKAGING, LINEWORKER	2351	2834	3337	503
2	BAKER	923	1113	1311	198
2	REPAIRER, TELEVISION	673	811	955	144
2	METAL FABRICATOR	648	782	921	139
3	JEWELLER	598	721	849	128
1	POULTRY PROCESSING PLANT WORKER	593	715	842	127
3	MACHINE OPERATOR, PLASTIC PRODUCTS	456	550	647	97
2	CUTTER, MEAT	437	526	620	94
3	OPERATOR, PETROLEUM INDUSTRY REFINERY	320	386	454	68
1	LABOURER, SAWMILL	296	357	421	64
2	CERAMIST	246	297	349	52
4	MANAGER, PRODUCTION	236	285	336	51
3	SUPERVISOR-FOREPERSON, SUGAR PROCESSING PRODUCTION	235	284	334	50
1	MACHINE OPERATOR, PLANT FILLING, BEVERAGE BOTTLING	194	233	275	42
2	SHOEMAKER, CUSTOM	195	235	276	41
2	MACHINE OPERATOR, CANDY- MAKING, CONFECTIONERY MANUFACTURE	170	205	242	37
3	OPERATOR, PLANT, OXYGEN AND NITROGEN	164	197	232	35
2	MACHINE OPERATOR, DOUGH PRODUCTS	159	192	226	34
3	SUPERVISOR, FOOD AND BEVERAGE MANUFACTURE	142	172	202	30
1	MACHINE OPERATOR, FOOD PRODUCTS PACKAGING	134	161	190	29
2	MACHINE OPERATOR, WOODWORKING	134	161	190	29
2	MAKER, PASTRY	126	152	179	27



Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
3	OPERATOR, SUGAR PROCESSING CHARGEHAND	123	148	175	27
2	CARPENTER, SHIP'S	122	147	173	26
2	SUPERVISOR, CHEMICAL PROCESSING OPERATIONS	114	138	163	25
3	SUPERVISOR, PRINTING	116	139	164	25
3	MACHINE OPERATOR, GARMENT INDUSTRY SEWING	104	125	147	22
2	FISH CUTTER/CLEANER, HAND	90	108	128	20
2	CAKE DECORATOR	94	114	134	20
3	SUPERVISOR, GARMENT MANUFACTURE	92	111	131	20

**TOTAL: 5 078**

## Appendix 6: Distribution

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
1	CLERK, SALES	17649	21278	25055	3777
2	DRIVER, TRUCK	5064	6106	7190	1084
2	CASHIER	5020	6053	7127	1074
2	CLERK, PRODUCTION	4734	5707	6720	1013
1	REPRESENTATIVE, SALES	4337	5229	6157	928
1	DRIVER, LIGHT VEHICLE	2995	3611	4252	641
4	MANAGER, RETAIL TRADE	2515	3032	3570	538
1	SMALL RETAIL SHOP AND PARLOUR KEEPER	2243	2704	3184	480
2	SHOPKEEPER	2175	2623	3088	465
1	WRAPPER-REPLENISHER	1986	2394	2819	425
1	VENDOR, STREET, OTHER PRODUCTS	1789	2157	2540	383
2	DRIVER, HEAVY VEHICLE	1606	1936	2280	344
2	BARTENDER	1560	1881	2215	334
3	CATERER	1484	1789	2107	318
1	KITCHEN ASSISTANT	1403	1691	1991	300
2	MERCHANDISER	1228	1481	1744	263
3	CHEF	1220	1471	1732	261
2	DRIVER, DELIVERY	1186	1429	1683	254
3	BAR OWNER	1130	1362	1604	242
3	SUPERVISOR, SALES, RETAIL TRADE	1080	1302	1533	231
2	DRIVER-SALESPERSON	1028	1240	1460	220
1	VENDOR, FRUITS AND VEGETABLES STALL/MARKET	1003	1209	1423	214
4	MANAGER, SALES	750	904	1065	161
1	VENDOR, FOOD	740	893	1051	158
2	DRIVER, FORK LIFT TRUCK	732	882	1039	157
1	VENDOR, FISH	657	792	933	141
3	MANAGER, RESTAURANT, FAST FOOD & CATERING SERVICE	529	637	750	113
3	MANAGER, SUPERMARKET	505	609	717	108
1	REPLENISHER	448	541	636	95

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
4	MANAGER, SALES AND MARKETING	416	502	591	89
1	COOK, FAST FOOD	348	419	494	75
1	WRAPPER	341	412	485	73
1	DRIVER, LORRY	332	400	471	71
3	SUPERVISOR, STORES	301	363	427	64
3	SMALL BUSINESS MANAGER, NEC	290	350	412	62
3	EXECUTIVE HOUSEKEEPER	284	342	403	61
1	WAITER	228	275	324	49
3	SUPERVISOR, RESTAURANT	167	201	237	36
3	SUPERVISOR, SALES, WHOLESALE TRADE	165	199	234	35
4	MANAGER, HOTEL	166	200	235	35
3	MANAGER, SERVICE STATION	143	173	204	31
1	SALESPERSON, DOOR TO DOOR	133	160	188	28
1	VENDOR, SNO-CONE	109	132	155	23
1	VENDOR, LOTTERY	94	114	134	20

**TOTAL: 15 474**

## Appendix 7: Personal Services

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
1	DRIVER, TAXI	10210	12310	14495	2185
1	SECURITY GUARD	10040	12104	14253	2149
1	DOMESTIC MAID	9753	11759	13846	2087
2	MECHANIC, MOTOR VEHICLE	7648	9221	10858	1637
2	DRESSMAKER	4671	5631	6631	1000
1	AUTOMOBILE BODY STRAIGHTENER	3475	4190	4934	744
2	ADMINISTRATIVE ASSISTANT	3333	4018	4732	714
1	SANITATION WORKER	3121	3763	4431	668
4	TEACHER, SECONDARY EDUCATION GRADUATE	3048	3675	4328	653
2	POLICE OFFICER	3007	3625	4268	643
1	ODD JOB WORKER	2781	3353	3948	595
1	HAIRDRESSER	2555	3081	3627	546
1	BABYSITTER	2463	2970	3497	527
1	JANITOR	2436	2937	3459	522
3	NURSE	2415	2912	3428	516
2	ESTATE CONSTABLE	2321	2798	3295	497
2	PRISON OFFICER	1779	2145	2526	381
2	ASSISTANT, NURSING	1706	2056	2421	365
1	MESSENGER	1196	1442	1698	256
2	FIREFIGHTER	1165	1405	1654	249
1	ATTENDANT, SERVICE STATION	1156	1393	1641	248
3	TAILOR, MASTER	1045	1260	1484	224
1	GARDENER	880	1060	1249	189
4	PRIMARY SCHOOL PRINCIPAL	863	1041	1226	185
3	CLERK, CUSTOMS	845	1019	1200	181
1	BARBER	761	917	1080	163
3	OFFICER, FIRE	675	814	959	145
1	GROUNDSMAN	617	744	876	132
3	ATTENDANT, HOSPITAL	556	671	790	119
4	ATTORNEY AT LAW	487	587	691	104
1	CARE GIVER	379	457	538	81

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
1	CHAUFFEUR	348	419	494	75
1	MINISTER OF RELIGION	321	387	456	69
1	CHAMBER MAID	303	365	430	65
3	POLICE SERGEANT	308	372	437	65
3	MUSICIAN	292	352	415	63
1	CAR WASHER	291	351	413	62
3	SANITATION SUPERVISOR - FOREPERSON	284	342	403	61
3	PHOTOGRAPHER	282	341	401	60
2	AIDE, NURSING	279	337	396	59
3	ASSISTANT, DENTAL	272	328	386	58
2	ARTIST, COMMERCIAL	253	304	358	54
3	INSTRUCTOR, TRADE	251	303	357	54
1	DISC JOCKEY	249	301	354	53
4	UNIVERSITY LECTURER	219	264	311	47
3	TECHNICIAN, ELECTRONICS ENGINEERING	210	253	298	45
1	PEST CONTROL WORKER	205	248	292	44
3	SEAMAN, COAST GUARD	199	240	283	43
4	TUTOR, ADULT EDUCATION	200	241	284	43
1	COSMOTOLOGIST	193	232	273	41
1	FLORAL ARRANGER	185	223	263	40
1	OFFICER, POSTAL	185	223	263	40
1	REPAIRER, TYRE	186	224	264	40
3	LIBRARIAN	188	227	267	40
3	NURSE, MIDWIFERY	154	186	219	33
1	DOMESTIC IRONER	144	174	205	31
1	BEAUTICIAN	127	154	181	27
4	DENTIST	127	154	181	27
4	INSPECTOR, PRODUCTS	118	142	167	25
4	OFFICER, HEALTH CONTROL	117	141	166	25
2	LEGAL SECRETARY	107	129	152	23
4	TEACHER, TECHNICAL AND VOCATIONAL, EDUCATION GRADUATE	110	133	156	23

<b>Required Level</b>	<b>Description</b>	<b>CSO CENSUS 2000 - ACTUAL</b>	<b>Projected Actual Number of Workers 2007</b>	<b>Projected Required Number of Workers 2008-2010</b>	<b>SHORTAGES</b>
1	AGRICULTURAL AND ANIMAL HUSBANDRY WORKER	101	121	143	22
2	AIDE, PHARMACY	97	117	138	21
3	LIFEGUARD	100	120	141	21
3	NURSE, PRIVATE DUTY	102	123	144	21
4	POLICE INSPECTOR	102	123	144	21

**TOTAL: 20 246**

## Appendix 8: Financial Services

Required Level	Description	CSO CENSUS 2000 - ACTUAL	Projected Actual Number of Workers 2007	Projected Required Number of Workers 2008-2010	SHORTAGES
4	ACCOUNTANT	2130	2568	3024	456
4	OFFICER, LOAN	533	642	756	114
4	COMPUTER PROGRAMMER	500	602	709	107
4	AUDITOR	492	593	699	106
4	OFFICER, BUSINESS DEVELOPMENT	445	537	632	95
4	SYSTEMS ANALYST	443	534	629	95
4	MANAGER, BANK	440	530	624	94
4	MANAGER, INSURANCE AGENCY	327	395	465	70
4	ANALYST, FINANCIAL	302	364	428	64
4	MANAGER, CAR RENTAL FIRM	123	148	175	27
4	MANAGER, SECURITY SERVICE	95	115	135	20
3	CLERK, BANK	2077	2504	2948	444
3	BANK TELLER	1296	1562	1840	278
3	INSURANCE SALES PERSON	1055	1272	1498	226
3	DESIGNER, GRAPHIC	493	595	700	105
3	INSTALLER, SECURITY SYSTEM	288	347	409	62
2	CUSTOMER SERVICE REPRESENTATIVE	1476	1779	2095	316
2	ASSISTANT, ACCOUNTING	944	1138	1340	202
2	SUPERVISOR, CLEANING	181	218	257	39
2	COLLECTOR, BILL	113	137	161	24
1	CLERK, INSURANCE	435	525	618	93
1	CLERK, FILING	432	521	614	93
1	CLERK, PAYROLL	391	471	554	83

**TOTAL: 3 213**

**Appendix 9: Agriculture**

<b>Required Level</b>	<b>Description</b>	<b>CSO CENSUS 2000 - ACTUAL</b>	<b>Projected Actual Number of Workers 2007</b>	<b>Projected Required Number of Workers 2008-2010</b>	<b>SHORTAGES</b>
2	FARMER, VEGETABLE & ROOT CROP	7594	7594	10780	3186
1	FARM WORKER	5697	6868	8087	1219
2	GARDENER, SELF-EMPLOYED	3918	4724	5563	839
1	VENDOR, FRUITS AND VEGETABLES	3312	3993	4701	708
1	LABOURER, AGRICULTURAL	2353	2837	3340	503
1	FISHERMAN	2168	2614	3078	464
4	AGRIBUSINESS, GRADUATE	880	1060	1249	189
2	DRIVER, WHEEL TRACTOR	881	1062	1250	188
1	VENDOR, FISH	657	792	933	141
1	POULTRY PROCESSING PLANT WORKER	593	715	842	127
1	FARM WORKER, POULTRY	406	489	576	87
2	FARMER, POULTRY	401	484	570	86

**TOTAL: 7 737**



## **Appendix 10: CARICOM Approved Regional Vocational Qualifications Framework**

### **Level 5 - Chartered & Advanced Professional**

Competence in theoretical and practical knowledge in developing strategic solutions to abstract and concrete problems relevant to a particular field of learning or occupation; autonomous with significant responsibility for the management of people and projects.

(e.g. **Chartered Engineers, Accountants**)

UWI, Association of Chartered & Certified Accountants (ACCA)

### **Level 4 – Professional / Managerial / Entrepreneurs**

Competence involving the application of a range of fundamental principles and complex techniques with personal accountability for the analysis, design, planning, execution and evaluation of work functions.

(e.g. **Under Graduate Degrees**)

University of the West Indies [UWI], University of Trinidad & Tobago [UTT]

### **Level 3 – Technician / Supervisor**

Competence in supervisory capabilities demonstrated through the responsibility for the work of others and the allocation of resources with strong problem solving, planning and designing skills

(e.g. **Associate Degrees, Technician Diplomas etc.**)

UTT Technical Institutes, COSTAATT

### **Level 2 – independent / Skilled Worker**

Competence in a broad range of complex, non-routine work activities performed in a wide variety of contexts. Considerable control, responsibility and autonomy are demonstrated and guidance of others is often required.

(e.g. **Craft Certificates such as Electrical Installation Craft, Tailoring, Landscaping, Cooks**)

MIC, Senior Secondary Schools, HYPE

### **Level 1 – Semi-skilled / Supervised Worker**

Competence in a variety of routine work related activities performed in different contexts most of which requires supervision during the early stage of employment.

(e.g. **Craft Certificates such as Masonry, Welding, Food Preparation, Front Office Clerk**):

YTEPP, UWI SoCS, Senior Secondary Schools, Servol, GVC Pt Fortin

## **Appendix 11: Occupational Standards developed by NTA**

The following table also shows the Occupational Standards, which have been developed by the NTA. Please note that these are **priority areas of training** for T&T, for which these Occupational Standards have been developed.

Sector	#	NOS	Level	Latest Revision date
<b>Agriculture</b>	001	Agricultural Operations	1	<b>Jul-2005</b>
	002	Cricket Pitch and Field Maintenance	2	<b>Oct-2007</b>
	003	Cricket Pitch and Field Maintenance	3	<b>Oct-2007</b>
	004	Cricket Pitch and Field Maintenance	1	<b>Oct-2007</b>
	005	Dairy Farming	1	<b>Nov-2006</b>
	006	Grow Box Operations	1	<b>Oct-2007</b>
	007	Horticultural Nursery Operations	1	<b>May-2007</b>
	008	Inland Aquaculture	1	<b>Sep-2005</b>
	009	Landscaping	1	<b>Feb-2005</b>
	010	Landscaping	2	<b>Mar-2003</b>
	011	Maintenance of Parks and Protected Terrestrial Areas	1	<b>May-2007</b>
	012	Maintenance of Parks and Protected Terrestrial Areas	2	<b>Sep-2007</b>
	013	Ornamental Aquaculture Operations	1	<b>Apr-2007</b>
	014	Poultry Farming	1	<b>Nov-2006</b>
	015	Poultry Processing	1	<b>Sep-2006</b>
	016	Soil Testing	1	<b>Mar-2006</b>
<b>Audio/visual</b>	017	Camera Operations	2	<b>Mar-2006</b>
	018	Editing	2	<b>Jun-2006</b>
	019	Live Sound Engineering	2	<b>Jan-2005</b>
	020	Photography	1	<b>Aug-2006</b>
	021	Recording Engineering	2	<b>Sep-2006</b>
	022	Technical Assistance in TV/Video Production	1	<b>Oct-2007</b>
<b>Business</b>	023	Administration	1	<b>Nov-2003</b>
	024	Merchandising	1	<b>Aug-2007</b>
<b>Construction</b>	025	Air Conditioning & Refrigeration	1	<b>Aug-2004</b>
	026	Air Conditioning & Refrigeration	2	<b>May-2007</b>
	027	Backhoe/ Loader operations	2	<b>Apr-2007</b>
	028	Basic Chaining	1	<b>May-2005</b>
	029	Blue Print Reading	1	<b>Apr-2004</b>
	030	Carpentry	1	<b>Nov-2003</b>
	031	Carpentry	2	<b>Sep-2004</b>
	032	Carpentry	3	<b>Dec-2002</b>

Sector	#	NOS	Level	Latest Revision date
	033	Construction Site Supervision	3	Sep-2003
	034	Crane Operation	1	Oct-2006
	035	Domestic Electrical Installation	1	Mar-2006
	036	Domestic Electrical Installation	2	Mar-2006
	037	Dump truck operations	2	Apr-2007
	038	Erecting & Dismantling Scaffolding	1	Mar-2004
	039	Excavator Operations	2	Apr-2007
	040	Forklift Operations	2	Apr-2007
	041	Gypsum Installation	1	Dec-2004
	042	Health, safety and environment for construction (units)	2	Apr-2007
	043	Heavy Equipment Electrical Maintenance	1	Nov-2006
	044	Heavy Equipment Mechanical Maintenance	1	Nov-2006
	045	Industrial & Commercial Electrical Installation	1	Mar-2006
	046	Industrial & Commercial Electrical Installation	2	Mar-2006
	047	Joinery	1	Mar-2005
	048	Joinery	2	Mar-2005
	049	Masonry	1	Feb-2005
	050	Masonry	2	Aug-2001
	051	Masonry	3	Aug-2001
	052	Painting	1	Apr-2004
	053	Pipe Laying	2	Sep-2006
	054	Plumbing	1	Jul-2005
	055	Plumbing	2	Nov-2003
	056	Rebar Bending	1	Sep-2005
	057	Steel Bending	1	Apr-2004
	058	Tile Laying	1	Dec-2004
	059	Vehicle Body Repairs & Paint Operations	1	Nov-2006
	060	Yacht Joinery & Woodworking	2	Nov-2004
<b>Cross sector</b>	061	Customer Service	2	Mar-2005
<b>Education</b>	062	Classroom Assistance	1	Mar-2005
	063	Library Services & Information Technology	1	Jul-2005
	064	Literacy and Numeracy	1	Sep-2004
	065	Technical Vocational Teacher	3	Mar-2004
<b>Energy</b>	066	Control Room Senior Operator	3	Oct-2003
	067	Developing an Awareness of HSE in the Workplace	1	Nov-2006
	068	Industrial Instrumentation	2	Aug-2001
	069	Industrial Instrumentation	3	Aug-2001

Sector	#	NOS	Level	Latest Revision date
	070	Industrial Insulation	1	<b>Jun-2005</b>
	071	Offshore Installation Management	3	<b>Oct-2003</b>
	072	Process Operator	2	<b>Apr-2001</b>
	073	Processing Operations: Hydrocarbons	1	<b>Dec-2002</b>
	074	Processing Operations: Hydrocarbons	2	<b>Dec-2002</b>
	075	Refinery Control Room Operations	3	<b>Dec-2002</b>
	076	Refinery Field Operations	2	<b>Dec-2002</b>
	077	Travel Safely by Helicopter	2	<b>Jun-2004</b>
	078	Welding	1	<b>Sep-2004</b>
	079	Welding (SMAW)	2	<b>Jan-2004</b>
	080	Welding (FCAW)	2	<b>Jan-2004</b>
<b>Engineering and Maintenance</b>	081	Automotive Maintenance	1	<b>Apr-2007</b>
	082	Automotive Maintenance	2	<b>Aug-2005</b>
	083	Automotive Maintenance	3	<b>Mar-2006</b>
	084	Consumer Electronic Servicing	1	<b>Apr-2007</b>
<b>Food and beverage Manufacturing</b>	085	Bench Fitting	1	<b>Jun-2007</b>
	086	Bench Fitting	2	<b>Dec-2004</b>
	087	Electrical and Instrumentation	1	<b>Nov-2002</b>
	088	Electrical and Instrumentation	2	<b>Nov-2002</b>
	089	Electrical and Instrumentation	3	<b>Nov-2002</b>
	090	Extrusion Operations	1	<b>Nov-2006</b>
	091	Extrusion Operations	2	<b>Jan-2007</b>
	092	Lathe Operations	1	<b>Jun-2007</b>
	093	Lathe Operations	2	<b>Dec-2004</b>
	094	Meat and Seafood Handling	1	<b>Sep-2006</b>
	095	Milling Operations	1	<b>May-2007</b>
096	Milling Operations	2	<b>Dec-2004</b>	
097	Process Operator	2		
098	Sheet Metal Fabrication	1	<b>May-2005</b>	
<b>Health</b>	099	Emergency Medical Services - Paramedic	3	<b>Apr-2007</b>
	100	Emergency Medical Technician	1	<b>Apr-2005</b>
	101	Emergency Medical Technician	2	<b>Apr-2005</b>
	102	Emergency Medical Technician	3	<b>Apr-2005</b>
	103	Providing Health Care	1	<b>Mar-2005</b>
<b>Information Technology</b>	104	Desktop Publishing	2	<b>May-2006</b>
	105	Networking	2	<b>May-2005</b>
	106	Personal Computer Repair	2	<b>Nov-2005</b>

Sector	#	NOS	Level	Latest Revision date
	107	Using CAD	1	Jan-2006
	108	Using CAD	2	Jan-2006
	109	Using Information Technology	2	Jul-2003
	110	Web Design	2	Oct-2005
	111	Web Design	3	Jun-2002
<b>Manufacturing</b>	112	Bamboo Weaving	2	Feb-2007
	113	Ceramic Making	2	May-2005
	114	Leather Goods Manufacture	2	Dec-2006
	115	Manufacturing Silencers	1	Jul-2005
	116	Papier-mâché Craft	2	Feb-2007
	117	Production Supervisor	3	Mar-2002
	118	Miniature Pan Manufacturing	1	Aug-2007
	119	Miniature Pan Manufacturing	2	Aug-2007
	120	Miniature Pan Tuning	2	Aug-2007
	121	Steelpan Manufacturing	1	Oct-2007
	122	Steelpan Manufacturing	2	Oct-2007
	123	Steelpan Tuning	2	Jan-2006
	124	Steelpan Tuning	3	Jan-2006
125	Upholstery	2	May-2005	
<b>Personal services</b>	126	Barbering	2	Jan-2006
	127	Beauty Therapy	1	Jun-2007
	128	Book Binding	1	Mar-2005
	129	Clothing Labelling	1	Apr-2005
	130	Design and Construction of Lingerie & Sleepwear	1	Jul-2006
	131	Fabric Design	1	Jun-2007
	132	Floral Arranging	1	Oct-2007
	133	Garment Construction	1	Jan-2007
	134	Hair Dressing	1	Feb-2005
	135	Hair Dressing	2	Apr-2005
	136	Home Furnishing	2	Jun-2007
	137	Jewellery Making ( Leather)	2	Sep-2005
	138	Jewellery Making (Seed)	2	Sep-2005
	139	Linen & Drapery Operations	2	Nov-2005
	140	Physical Training Instructor	3	Mar-2004
	141	Providing Nail Technology Services	1	Jun-2005
	142	Providing Nail Technology Services	2	Jun-2005
143	Providing Nail Technology Services	3	Oct-2005	
144	Screen Printing	2	Nov-2005	

Sector	#	NOS	Level	Latest Revision date
<b>Tourism and Hospitality</b>	145	Banqueting	1	<b>Mar-2006</b>
	146	Bartending	1	<b>Sep-2006</b>
	147	Bellman Operations	1	<b>Jan-2006</b>
	148	Bread, Cake & Pastry	1	<b>Oct-2006</b>
	149	Cake Baking and Decoration	1	<b>May-2004</b>
	150	Community Guide	1	<b>Feb-2006</b>
	151	<i>Dive Guide: Recreational Diving</i>	3	<b>Aug-2000</b>
	152	Doorman Operations	1	<b>Jan-2006</b>
	153	Food Preparation	1	<b>May-2004</b>
	154	Front Office	1	<b>Feb-2005</b>
	155	Housekeeping	1	<b>Sep-2005</b>
	156	Housekeeping	2	<b>Aug-2001</b>
	157	Housekeeping	3	<b>Aug-2001</b>
	158	Laundry Services	1	<b>Sep-2005</b>
	159	Property Upkeep	1	<b>Mar-2005</b>
	160	Storekeeping	1	<b>May-2005</b>
	161	Tour Guide	3	<b>Apr-2005</b>
162	Waitering	1	<b>Oct-2006</b>	
<b>Transport</b>	163	Defensive Driving	2	<b>Apr-2007</b>

NB: Those highlighted are those developed before 2004 and are under review