

Designed to help
gain a deeper
understanding of
our events and
the customers
that attend them.



Registration Trendline Tool

View weekly registration and revenue performance vs. plan.
Includes events from fiscal year 2014 an onward.
Refreshes daily.



Attendee Profiler

Break down the attendee profile for any given event.
Includes events from fiscal year 2014 an onward.
Refreshes daily.



Post-Conference Dashboard

Assess finalized performance for any event.
Includes events from fiscal year 2017 an onward.
Events only included once all revenue and costs are finalized.

Registration Trendline Tool

[Back to menu](#) [Reset all filters](#)

Fiscal Year
All

Conference Name
Public Sector Leadership

Unique Name
All

Meeting Code
20-0018

Project Code
All

Meeting City
All

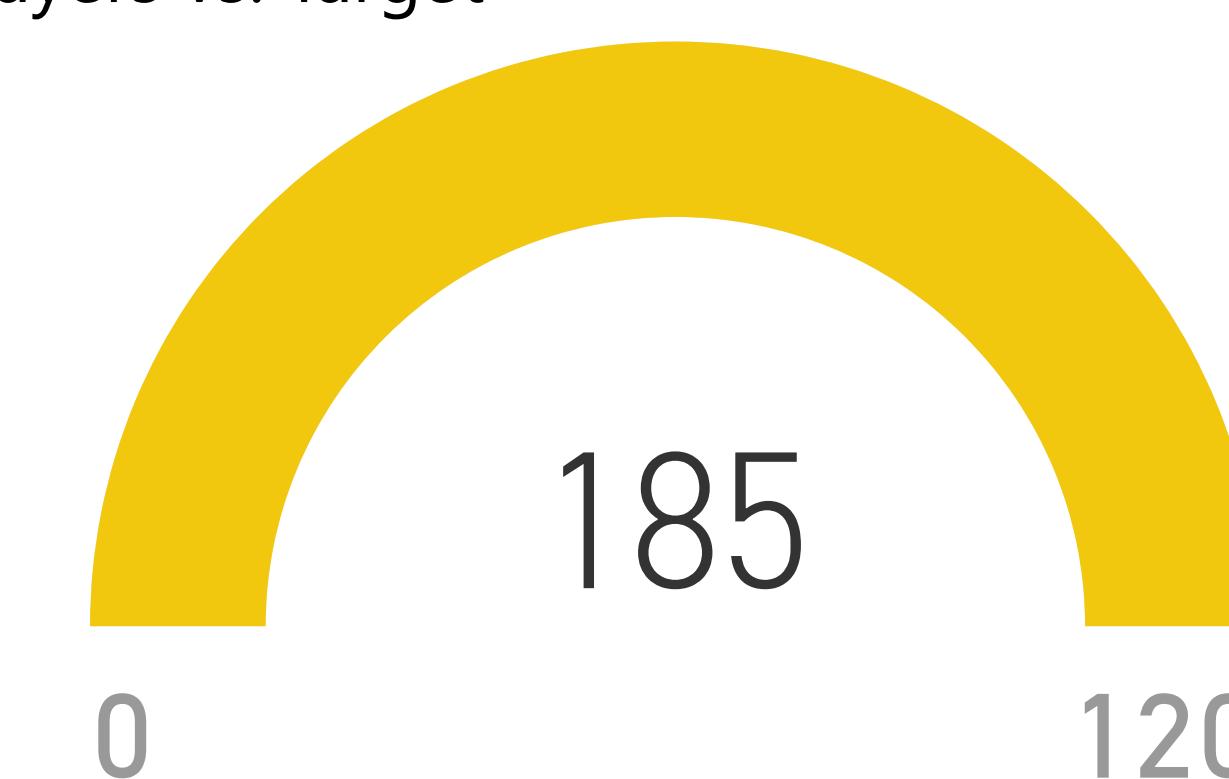
1
Event(s) Selected

185
Payers

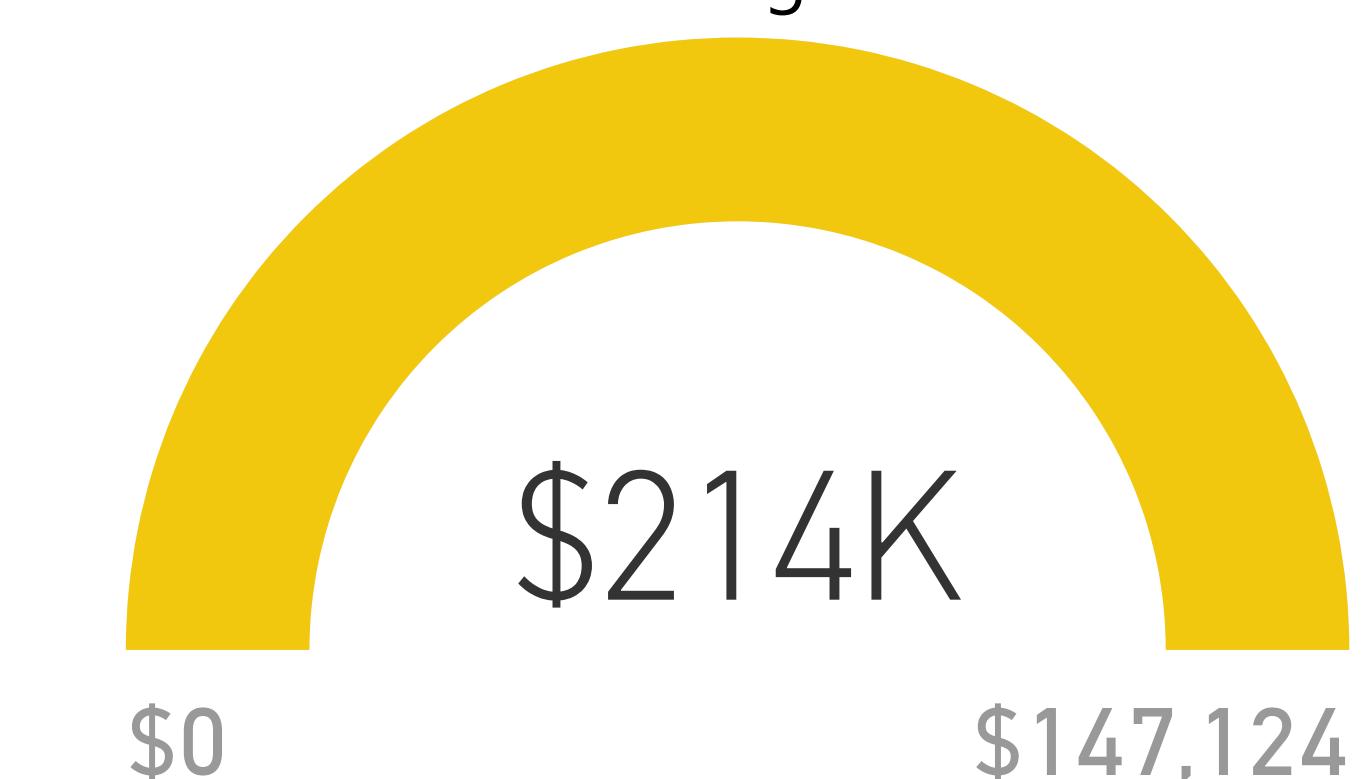
241
Attendees

\$214K
Total Revenue

Payers vs. Target

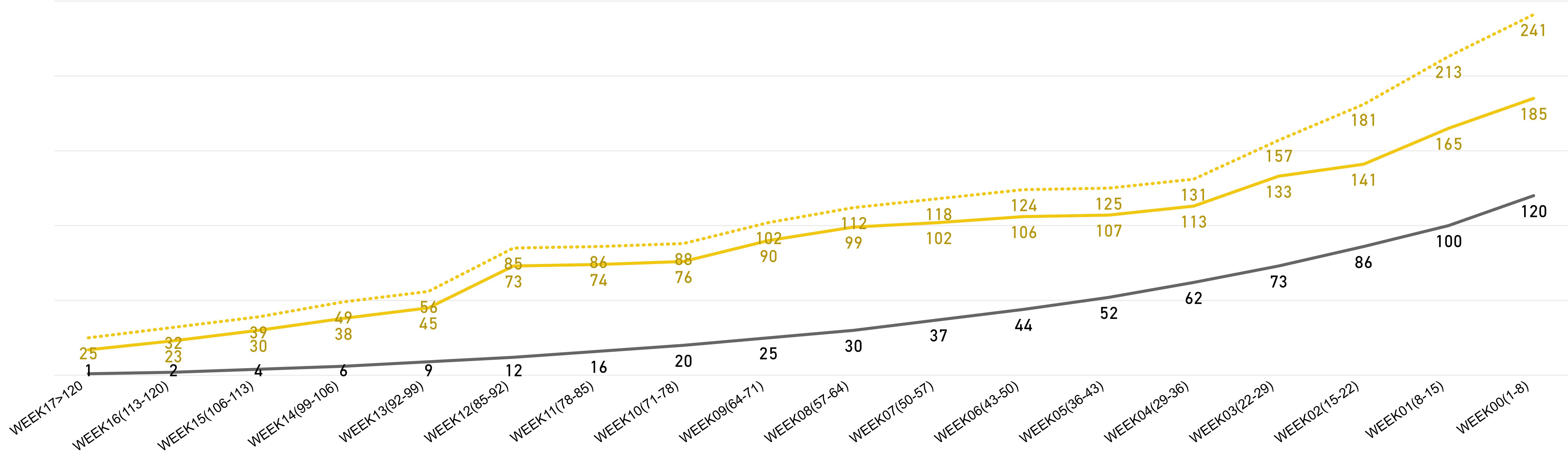


Registration Revenue vs. Target



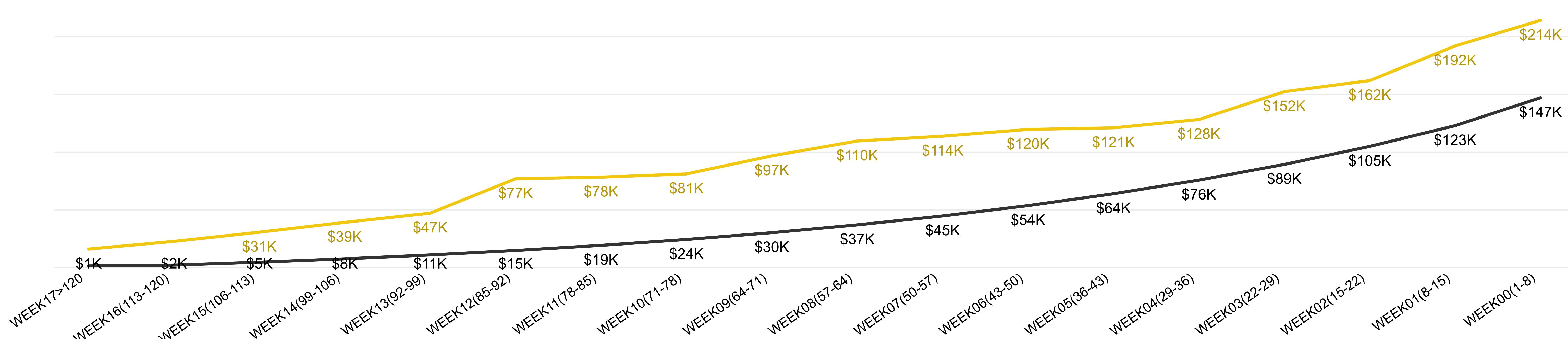
Registration Trendline

● Target ● Payers ● Registrants



Revenue Trendline

● Revenue Target ● Revenue Generated

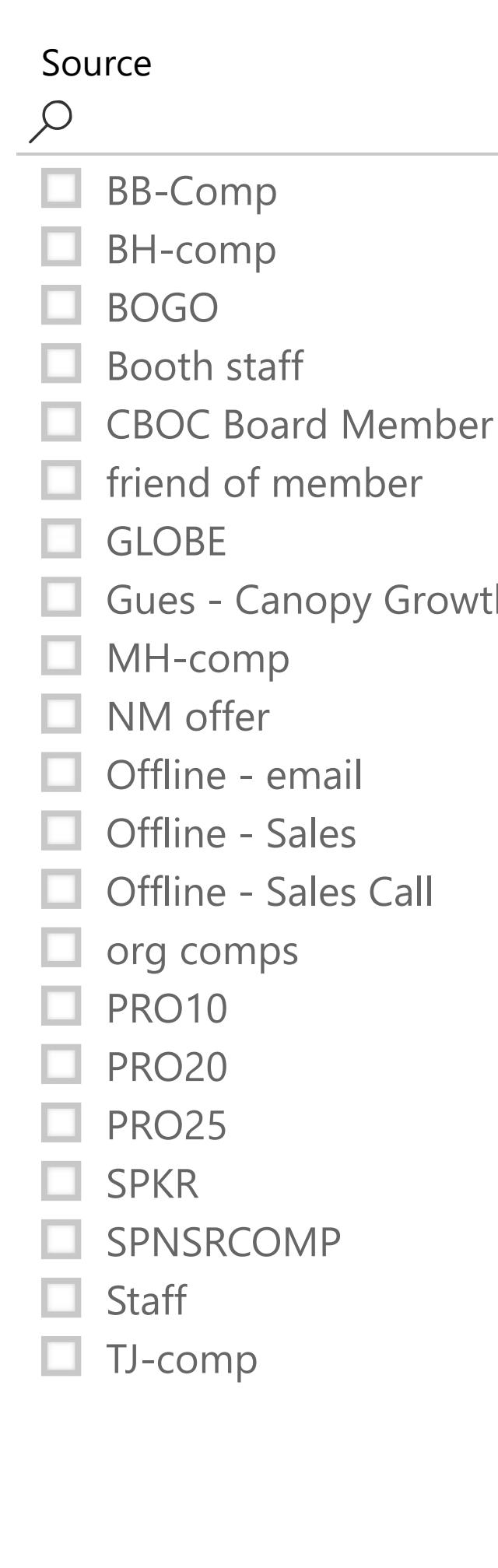
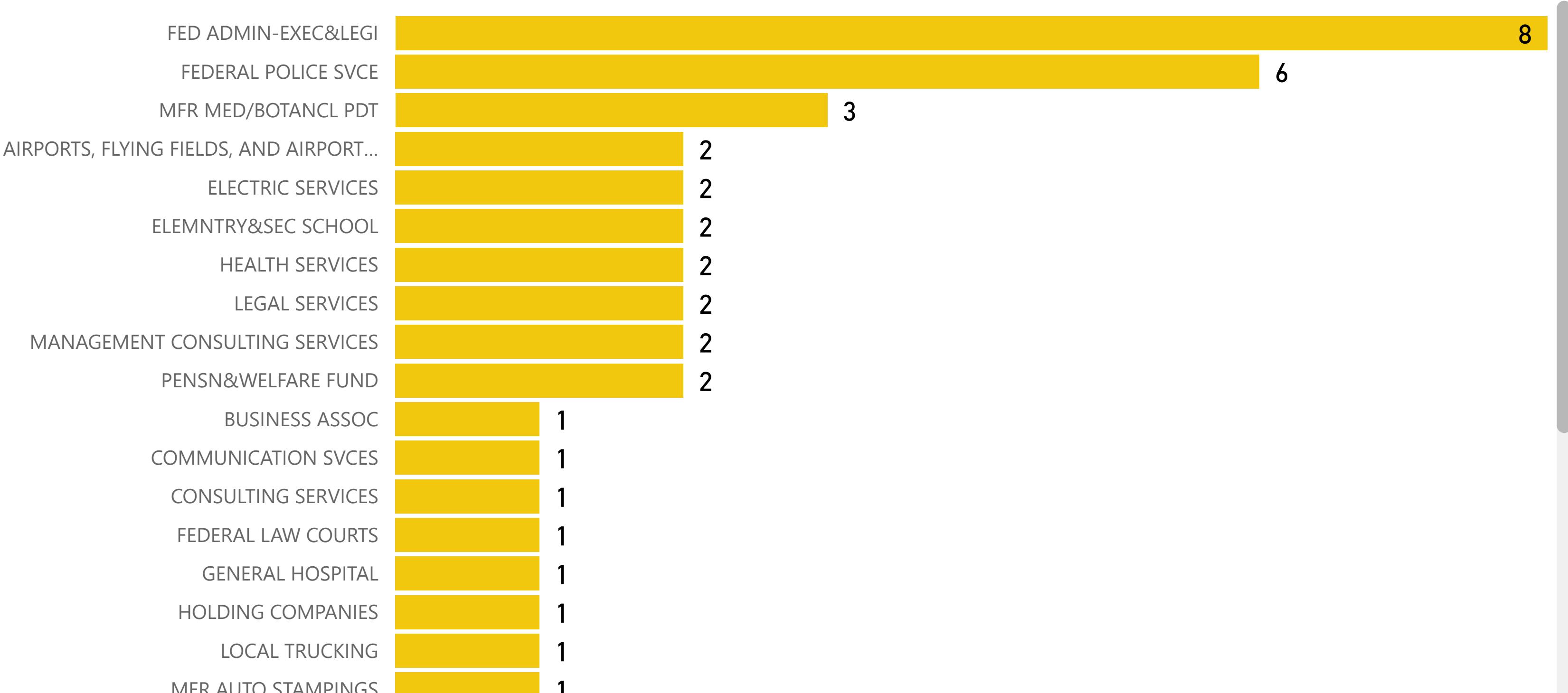
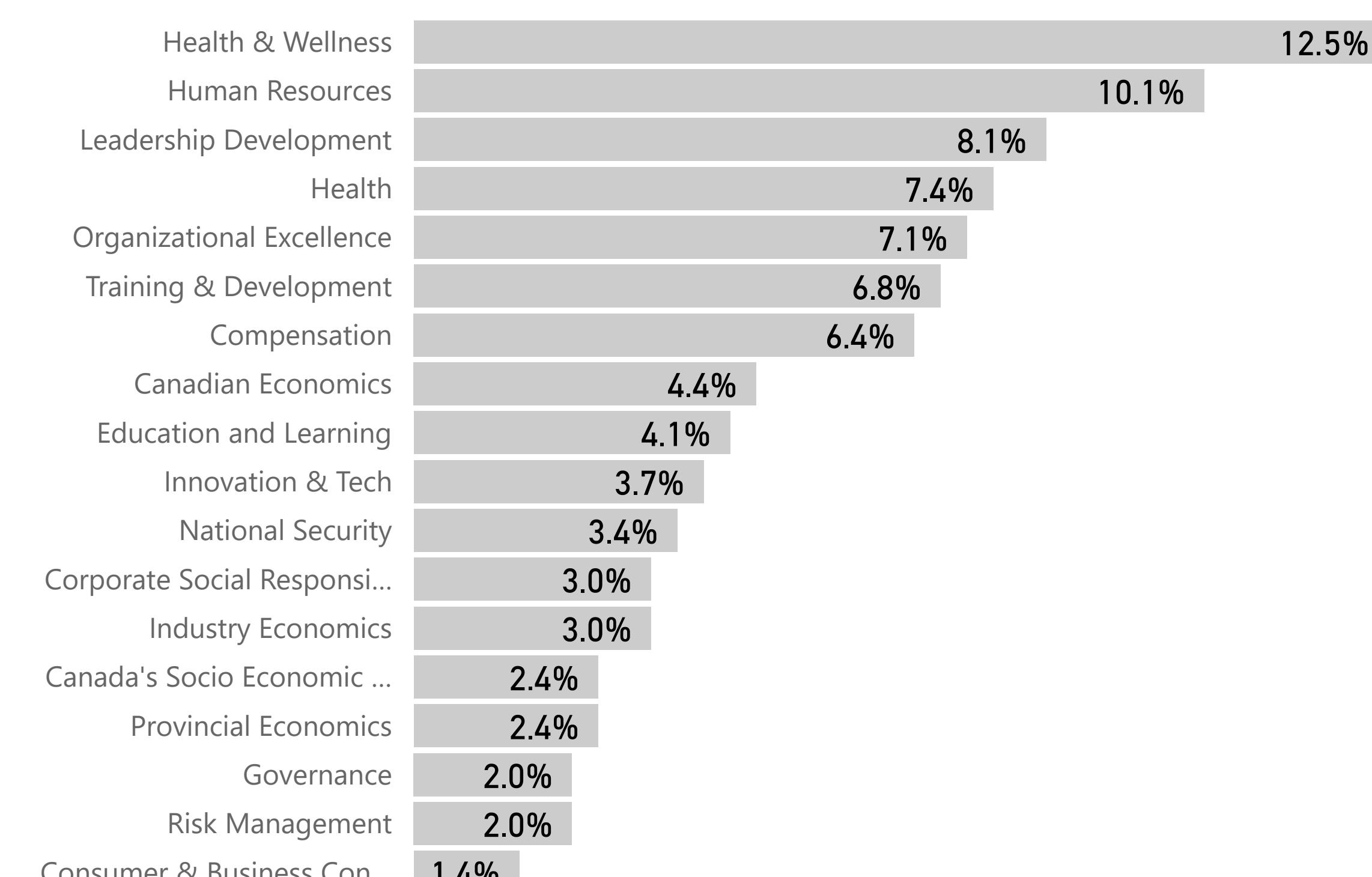
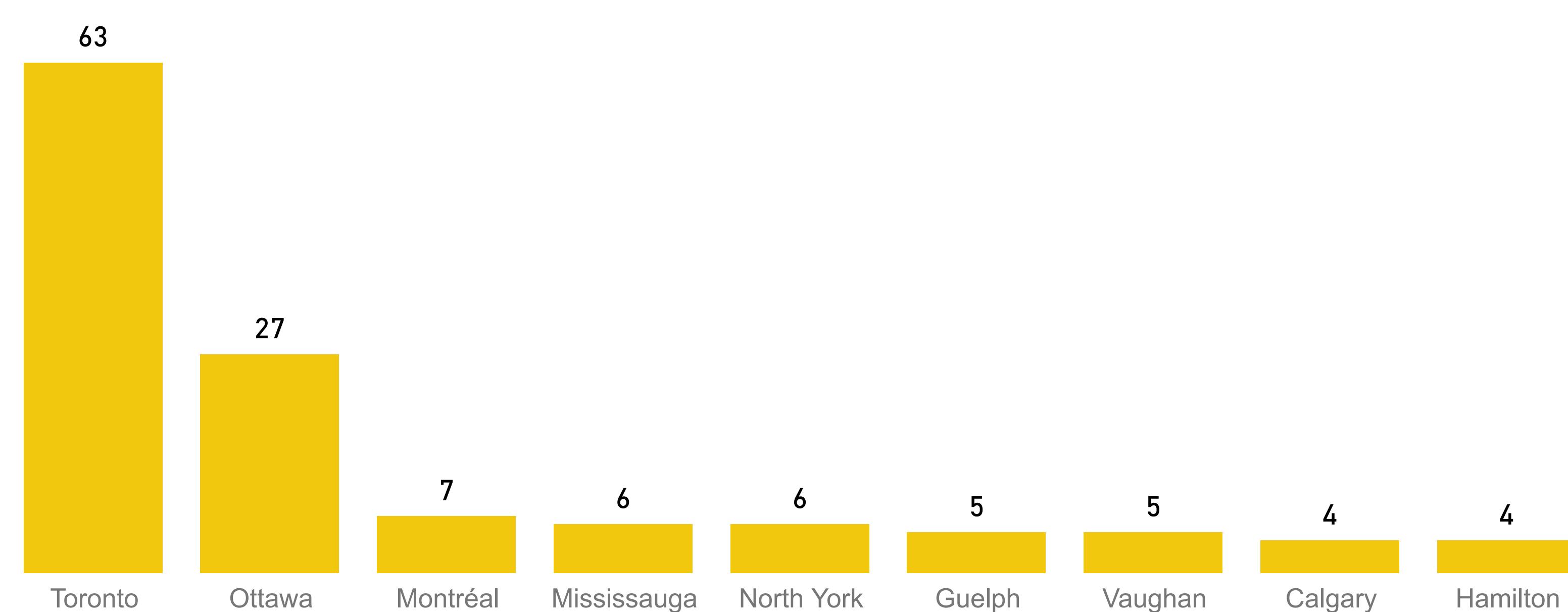
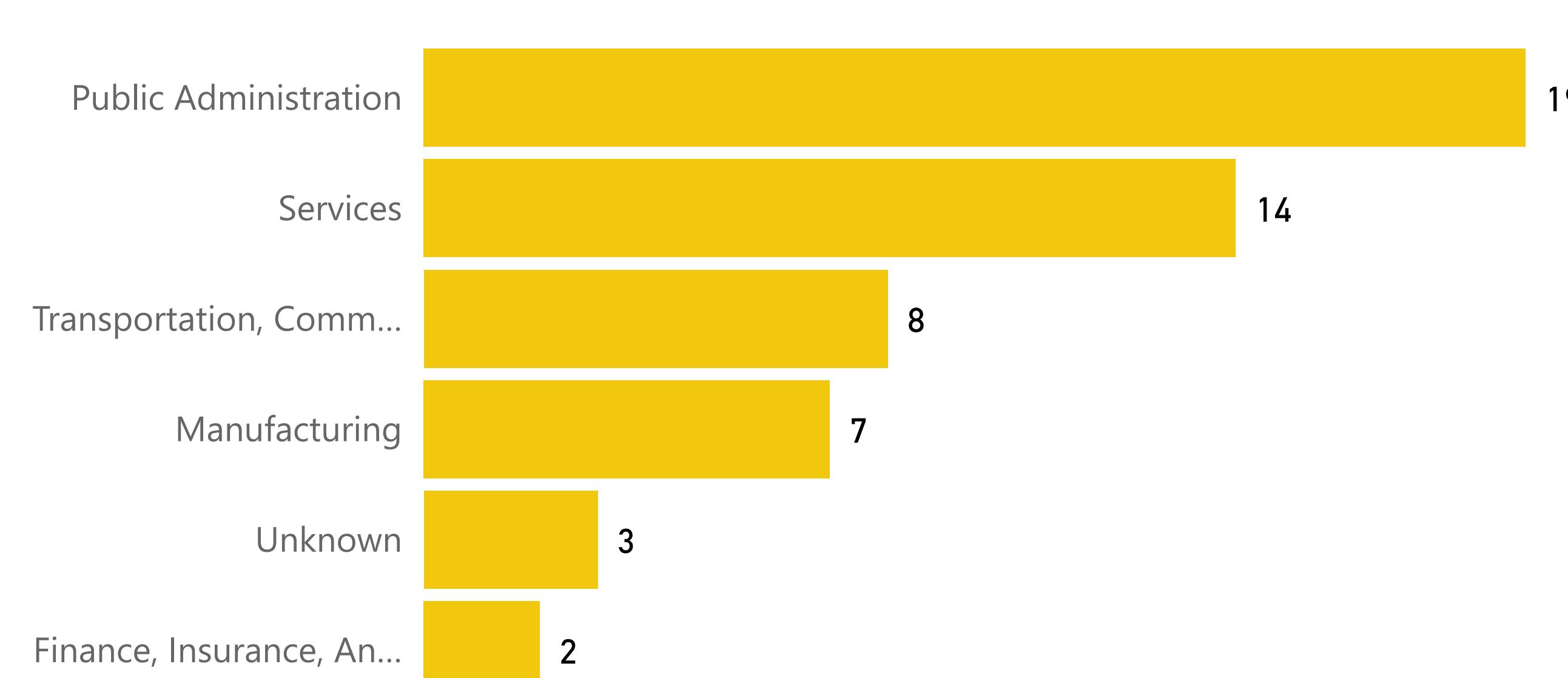
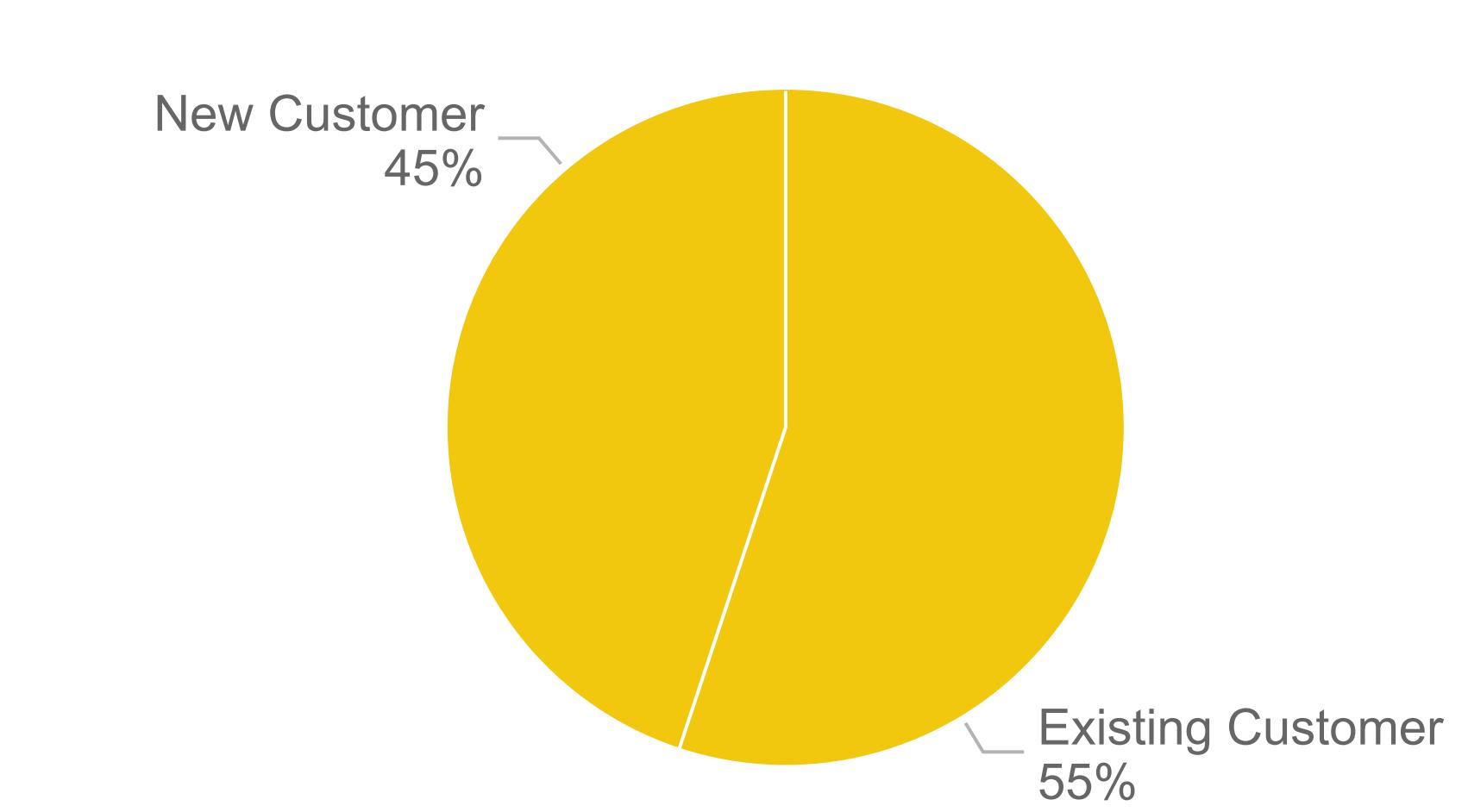
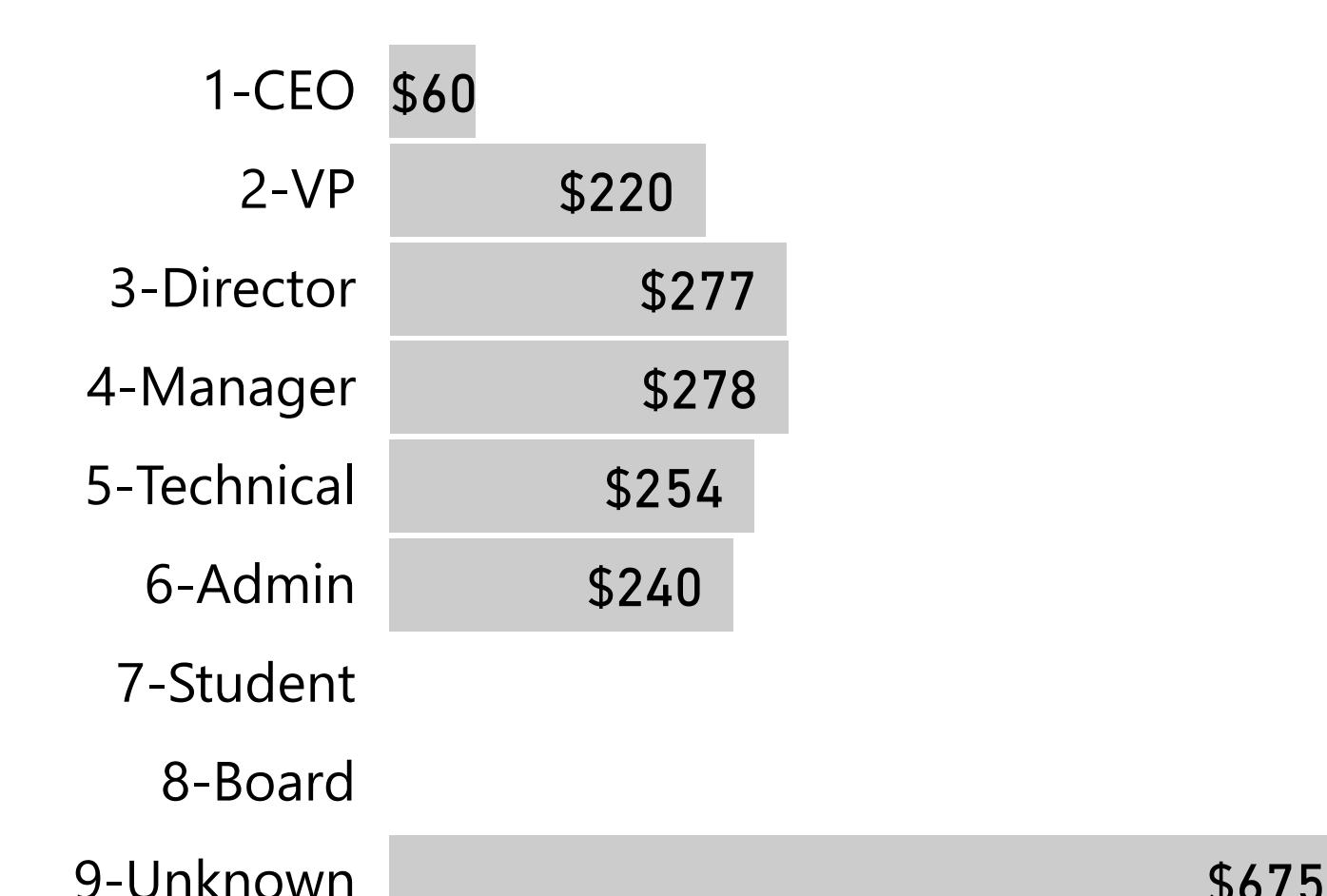
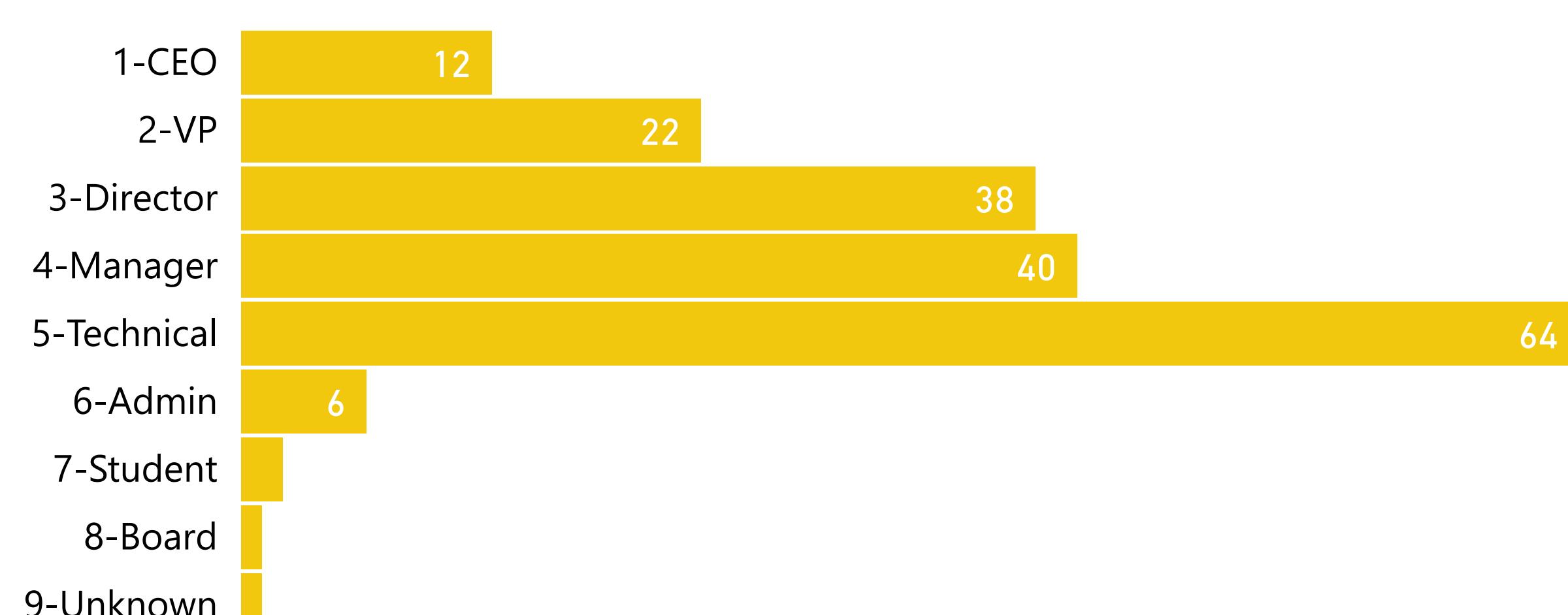
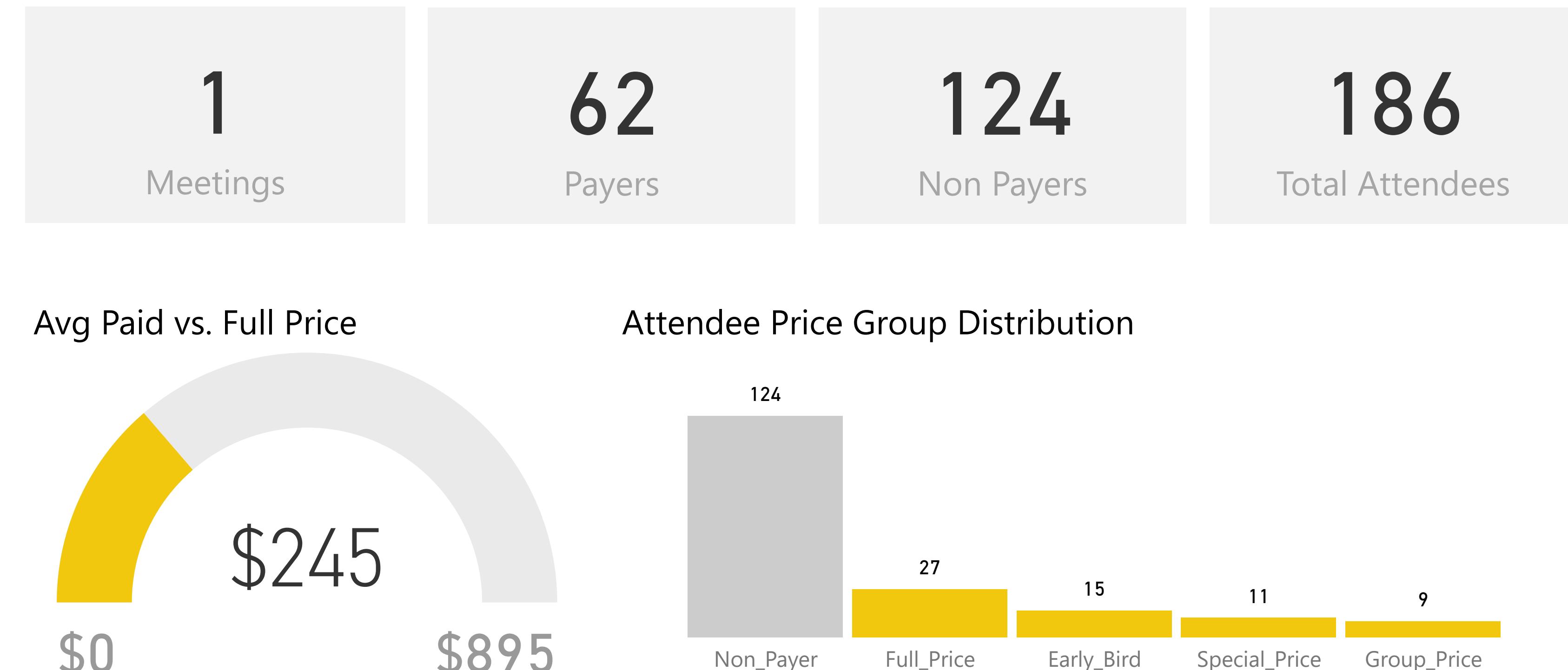


Attendee Profiler

A circular icon containing a black arrow pointing to the left, indicating a return action.

 Reset all filters

Fiscal Year	All
Unique Name	All
Meeting Code	19-0060
Project Code	All
Meeting City	All
Conference Name	 Cannabis at Work



Post-Conference Dashboard

[Back to menu](#)
[Reset all filters](#)

10/3/2016

5/29/2019

Fiscal Year

Conference Series

Product Code

Knowledge Centre

Event Price

City

Search by Conference Name



- 4th Skills and Post-Secondary Education Summit 2016
- 5th Annual Canadian Food & Drink Summit 2016
- 5th Skills and Post-Secondary Education Summit 2017
- Atlantic Business Outlook: New Brunswick
- Atlantic Business Outlook: Newfoundland and Labrador
- Atlantic Business Outlook: Nova Scotia
- Atlantic HR 2017
- Automated Vehicles 2017
- Automated Vehicles 2018
- Blockchain 2018: Seizing the Opportunity of "The Internet of Value"
- Business [Un]Usual: Profit from Purpose (Corporate Social Responsi...)
- Canadian Food & Drink Summit 2017: Measuring Performance, Taki...
- Canadian Food & Drink Summit 2019
- Canadian Immigration Summit 2017
- Canadian Immigration Summit 2018
- Canadian Immigration Summit 2019

95

Event(s) Selected

12K

Total Attendees

125

Att per Event

\$11M

Total Revenue

\$7M

Total Event Costs

\$4M

Surplus

\$820

Revenue per attendee

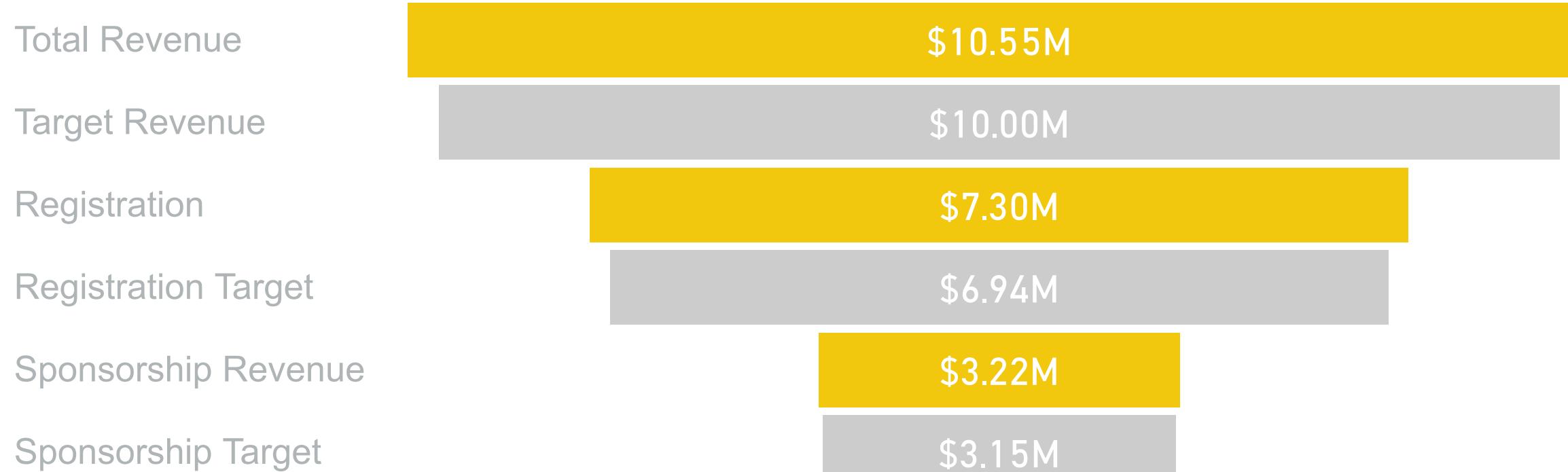
\$547

Cost per attendee

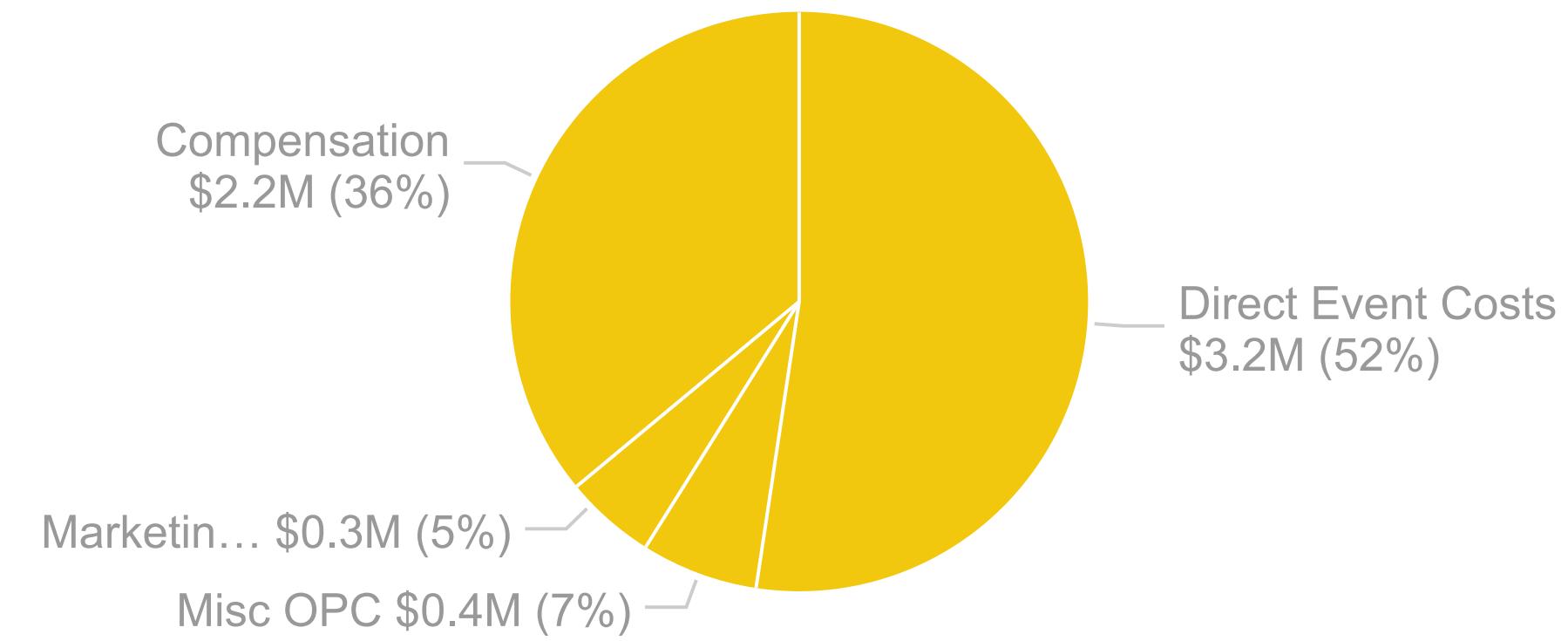
57%

Surplus Rate

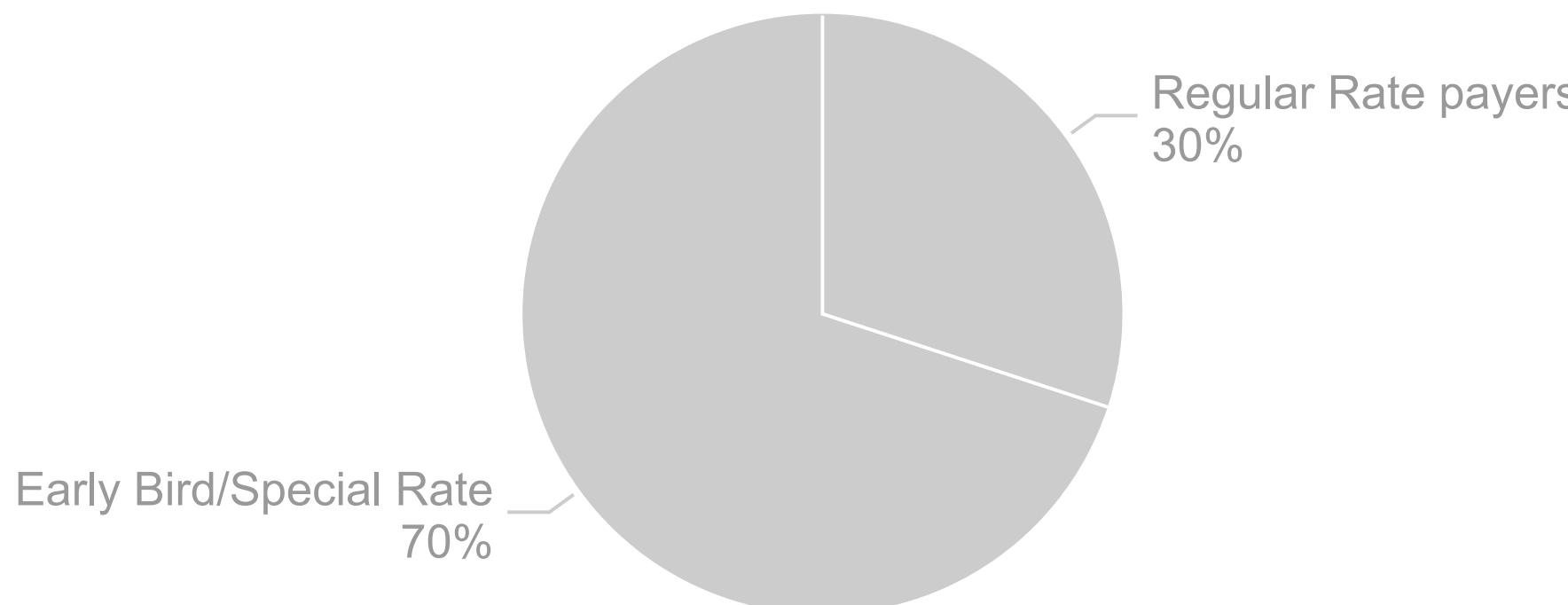
Revenue vs. Target



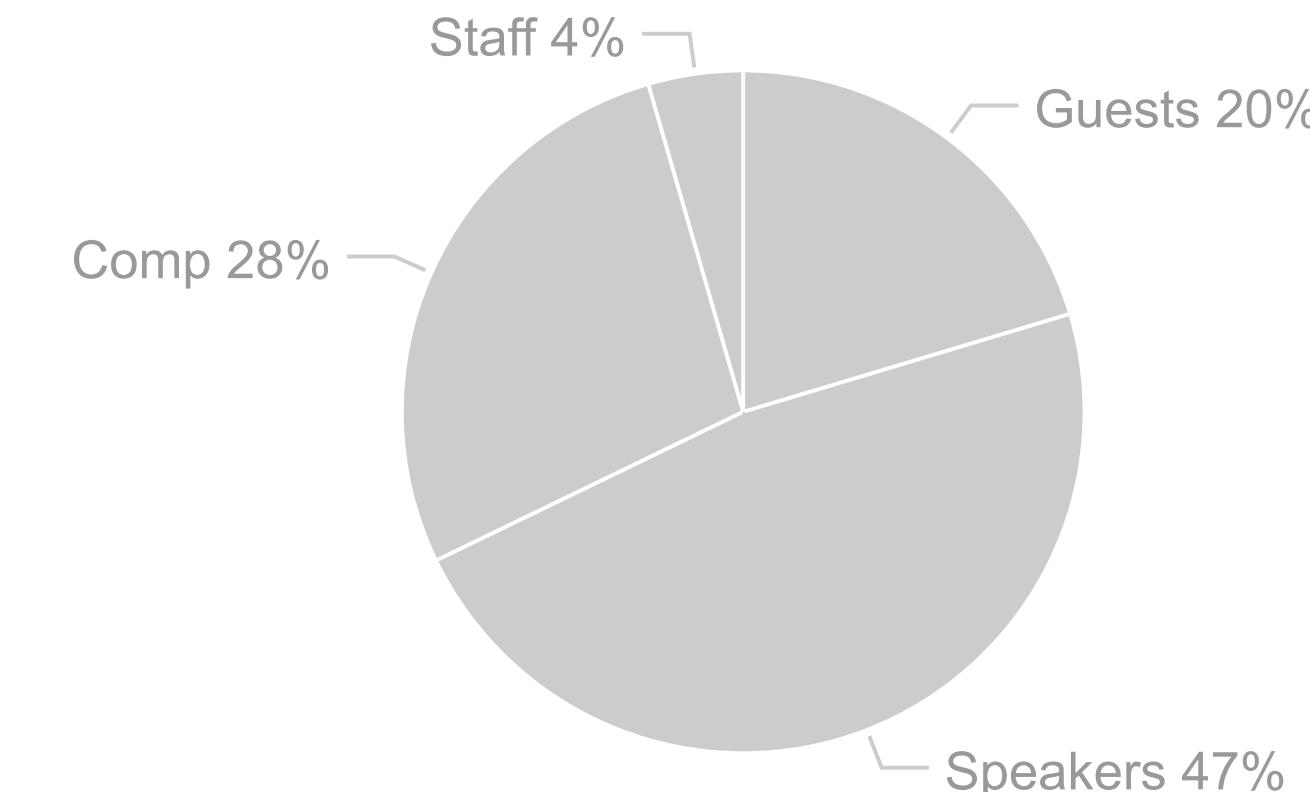
Breakdown of Total Costs



Breakout of Paid Attendees



Breakdown of Free Attendees



Event Breakdown

Fiscal Year	Product Code	Conference Title	Price	Total Revenue	Registration Revenue	Sponsorship Revenue	Total Event Expenses	Surplus%	Net Payers	Total Attendees	Revenue per attendee	Cost per attendee	CSAT	NPS
2019	19-0069	Operationalizing Workplace Mental Health - Vancouver	\$850.00	\$34,550	\$32,550	\$2,000	\$21,801	58%	44	50	\$691	\$436		
2019	19-0068	Mental Health in the Capital 2019	\$995.00	\$181,053	\$113,393	\$67,250	\$98,429	84%	143	216	\$838	\$456		
2019	19-0068	Operationalizing Workplace Mental Health - Ottawa	\$555.00	\$35,961	\$33,961	\$2,000	\$18,578	94%	74	80	\$450	\$232		
2019	19-0067	Operationalizing Workplace Mental Health - Calgary	\$850.00	\$27,300	\$25,300	\$2,000	\$16,980	61%	32	38	\$718	\$447		
2019	19-0066	Operationalizing Workplace Mental Health - Halifax	\$850.00	\$29,750	\$27,750	\$2,000	\$24,687	21%	35	42	\$708	\$588		
2019	19-0065	Operationalizing Workplace Mental Health - Toronto	\$850.00	\$42,163	\$40,163	\$2,000	\$17,029	148%	56	65	\$649	\$262		
2019	19-0049	Canadian Immigration Summit 2019	\$995.00	\$222,355	\$151,655	\$70,000	\$147,960	50%	240	379	\$587	\$390		
2019	19-0039	Canadian Food & Drink Summit 2019	\$995.00	\$123,310	\$86,925	\$34,750	\$102,278	21%	99	153	\$806	\$668		
2019	19-0038	Taking Enterprise Risk Management to the Next Level: ...	\$899.00	\$87,615	\$77,030	\$10,000	\$63,248	39%	93	122	\$718	\$518		
2019	19-0036	Public Sector HR 2019	\$1,395.00	\$242,775	\$177,040	\$63,000	\$96,852	151%	193	254	\$956	\$381		
2019	19-0035	Corporate Culture 2019	\$1,399.00	\$180,635	\$152,845	\$25,000	\$112,182	61%	160	198	\$912	\$567	4.63	50.00
2019	18-0154	Public Sector Transformation 2018	\$1,855.00	\$91,793	\$83,643	\$7,000	\$64,742	42%	67	92	\$998	\$704	4.38	11.76
2019	18-0153	Diversity & Inclusion 2018	\$1,855.00	\$159,558	\$110,658	\$48,000	\$116,411	37%	126	174	\$917	\$669	4.35	38.46
2019	18-0150	Public Sector Social Media 2018	\$1,655.00	\$67,955	\$63,855	\$0	\$45,468	49%	44	62	\$1,096	\$733	3.70	40.00
2019	18-0143	Marijuana Conference	\$1,195.00	\$142,658	\$100,658	\$42,000	\$46,398	207%	93	115	\$1,241	\$403	4.31	61.90
2019	18-0125	Education and Skills Symposium 2018	\$1,195.00	\$187,490	\$113,565	\$72,885	\$158,102	19%	116	207	\$906	\$764	4.29	19.05
2019	18-0124	Entrepreneur & Investor Immigration Summit 2018	\$895.00	\$183,415	\$117,063	\$66,152	\$100,857	82%	166	258	\$711	\$391	4.08	12.00
2018	18-0123	Leading Mentally Healthy Workplaces - Edmonton	\$850.00	\$12,600	\$12,600	\$0	\$6,105	106%	16	23	\$548	\$265		
2018	18-0114	Atlantic Business Outlook: New Brunswick	\$249.00	\$14,418	\$7,918	\$6,500	\$13,377	8%	32	49	\$294	\$273		
2018	18-0113	Atlantic Business Outlook: Nova Scotia	\$249.00	\$18,458	\$11,958	\$6,500	\$17,904	3%	46	71	\$260	\$252		
2018	18-0108	Value-Based Procurement 2018	\$895.00	\$95,362	\$60,262	\$35,000	\$61,828	54%	82	115	\$829	\$538		
2019	18-0101	Workplace Mental Health 2018	\$1,855.00	\$200,365	\$160,365	\$40,000	\$99,230	102%	102	147	\$1,363	\$675	4.14	23.08
2019	18-0100	Automated Vehicles 2018	\$1,395.00	\$110,610	\$51,235	\$59,000	\$61,042	81%	83	185	\$598	\$330	4.17	6.67

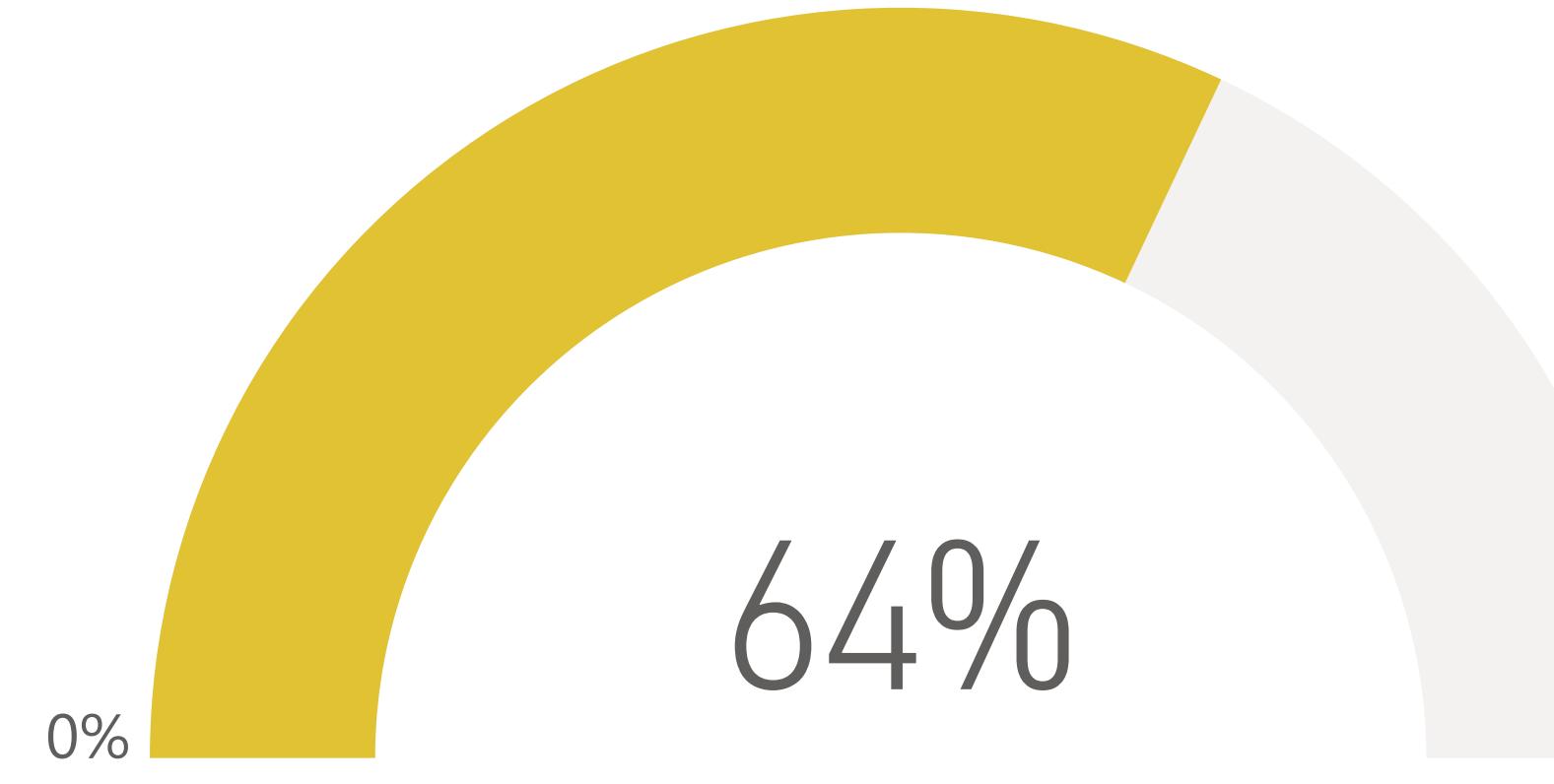
Sales Performance Report

Sales_Rep
<input type="checkbox"/> Brendan Hayes
<input type="checkbox"/> Catherine Labossiere
<input type="checkbox"/> Darrell Wiggins
<input type="checkbox"/> Kitty Bentley
<input type="checkbox"/> Tracie Jones
<input type="checkbox"/> Virginia Campagna

Interaction Date

1/1/2020 1/31/2020

Average Team SSI (%)



Team Targets

Tracie Jones	451.85K
Brendan Hayes	103.00K
Virginia Campagna	103.00K
Catherine Labossiere	68.00K
Kitty Bentley	68.00K
Darrell Wiggins	42.00K

6

Sales_Rep

1533

Interactions

919

Customers Contacted

563

Organizations Contacted

1.63%

Tactic Conversion_Rate

0.03

Customer Conversion Rate2

24

Invoices

\$31,795

Invoiced Revenue

168519

Claimed Revenue

Interactions within Sales Funnel

Sales_Rep	Call	Email	Meeting	Social	Total
Brendan Hayes	43	59	16	51	169
Catherine Labossiere	218	27	11		256
Darrell Wiggins	76	72	12		160
Kitty Bentley	213	193		280	686
Tracie Jones	7	29	2	7	45
Virginia Campagna	116	43	15	43	217
Total	673	423	56	381	1533

Interactions by Product Line

Sales_Rep	Conference	Contract Research	Enterprise	Network	Niagara	Other	Publication	Sponsorship	Subscription (e-Lib / e-Data)	Total
Brendan Hayes	14	7	66	2	4	16	1	55	4	169
Catherine Labossiere	5	1	53	172	3	1	1	5	15	256
Darrell Wiggins	123								36	160
Kitty Bentley	261			425					686	
Tracie Jones			2					43	45	
Virginia Campagna	15	8	90	89	1	1	2	5	6	217
Total	418	16	211	688	8	18	5	108	61	1533

Reason for Contact & Outcome

Outcome	Conference	Contract Research	Enterprise	Network	Niagara	Other	Publication	Sponsorship	Subscription (e-Lib / e-Data)	Total
Contact Made	155		2	67	398	2	5	40	13	
Converted Sale	36				17	2	2	7		
Next Step Scheduled	2	6	48	39	1	4		37	22	
No Contact	224	2	92	130	1	9	2	13	24	
Opportunity	1	5	4	5	2		1	2	2	
Other		1		99				9		
Total	418	16	211	688	8	18	5	108	61	1533

Conversion by Sales Rep

Sales_Rep	Tactic Conversion_Rate2	Customer Conversion Rate2	Claimed Revenue	Invoices
Brendan Hayes	2.37%	0.04	48895	4
Catherine Labossiere			13509	
Darrell Wiggins	5.63%	0.10	2050	9
Kitty Bentley	1.60%	0.03	1220	11
Tracie Jones	2.22%	0.03	57500	1
Virginia Campagna			45345	
Total	1.63%	0.03	168519	25


Revenue Vs. Targets

Sales_Rep	Annual_Target	Avg_Monthly_Target	Claimed Revenue	Invoiced Revenue	Pitch Revenue	Closed Revenue	Achieve_Rev_Monthly_Target	Achieve_Ann_Rev_Target
Darrell Wiggins	42,000.00	3,500.00	2050	\$12,030			344%	28.64%
Kitty Bentley	68,000.00	5,666.67	1220	\$9,755	201,115.00	1,180.00	172%	14.35%
Tracie Jones	451,850.00	37,654.17	57500	\$7,000	49,000.00	50,500.00	19%	1.55%
Brendan Hayes	103,000.00	8,583.33	48895	\$3,010	1,397,157.00	54,068.00	35%	2.92%
Catherine Labossiere	68,000.00	5,666.67	13509		5,225.00	5,225.00		
Virginia Campagna	103,000.00	8,583.33	45345		266,660.00	2,085.00		
Total	835,850.00	69,654.17	168519	\$31,795	1,919,157.00	113,058.00	46%	3.80%

Revenue Channel

Sales_Rep	Objective	Annual_Target	Avg_Monthly_Target	Claimed Revenue	Invoiced Revenue	Pitch Revenue	Closed Revenue	Achieve_Rev_Monthly_Target	Achieve_Ann_Rev_Target
Darrell Wiggins	New Business	24,000.00	2,000.00	2050	\$12,030			602%	50.13%
Darrell Wiggins	Subscription (e-Lib / e-Data)	18,000.00	1,500.00	2050	\$12,030			802%	66.83%
Kitty Bentley	New Business	44,000.00	3,666.67	1220	\$9,755	201,115.00	1,180.00	266%	22.17%
Kitty Bentley	Subscription (e-Lib / e-Data)	24,000.00	2,000.00	1220	\$9,755	201,115.00	1,180.00	488%	40.65%
Tracie Jones	New Business	51,850.00	4,320.83	57500	\$7,000	49,000.00	50,500.00	162%	13.50%
Tracie Jones	Sponsorship	400,000.00	33,333.33	57500	\$7,000	49,000.00	50,500.00	21%	1.75%
Brendan Hayes	New Business	70,000.00	5,833.33	48895	\$3,010	1,397,157.00	54,068.00	52%	4.30%
Brendan Hayes	Subscription (e-Lib / e-Data)	33,000.00	2,750.00	48895	\$3,010	1,397,157.00	54,068.00	109%	9.12%
Catherine Labossiere	New Business	44,000.00	3,666.67	13509		5,225.00	5,225.00		
Catherine Labossiere	Subscription (e-Lib / e-Data)	24,000.00	2,000.00	13509		5,225.00	5,225.00		
Virginia Campagna	New Business	70,000.00	5,83						

Rep Performance Tool



Consumption Level Filters

These filters allow you to filter at the customer transaction level.

Product Group

- a_Research
- b_Councils
- c_Subscriptions
- d_eData
- e_Conferences & Workshops
- f_Pubs & Webinars
- g_Sponsorship
- h_Niagara
- i_Misc

Product Code & Name

- 00-0001-NI - 5481200-05-5530200 Recharge - Accommoda...
- 00-0001-NI/MAIN - Leadership Development Program
- 00-0002-NI/MAIN - Leadership Development Program
- 00-0003-NI/MAIN - Leadership Development Program
- 00-0004-NI/MAIN - Leadership Development Program
- 00-0005-NI/MAIN - Leadership Development Program
- 00-0006-NI/MAIN - Leadership Development Program
- 00-0007-NI/MAIN - Leadership Development Program
- 00-0008-NI - 4781600-05-4230200 - WWO (Falconbridge) ...
- 00-0008-NI/MAIN - Working With Others
- 00-0009-NI/MAIN - Working With Others
- 00-0010-NI/MAIN - Leadership Development Program
- 00-0011-NI/MAIN - Leadership Development Program
- 00-0012-NI/MAIN - Leadership Development Program
- 00-0013-NI - 4881200-05-4230200 - WWO (CBC) Oct 17-2...
- 00-0013-NI/MAIN - Working With Others
- 00-0014-NI - 5481800-05-4230200 - LDP (CBC) Oct 22,27,00
- 00-0014-NI/MAIN - Leadership Development Program
- 00-0015-NI/A - MAIN
- 00-0017-NI - 5482000-05-4230200 - (CBC) Oct29-Nov3,00
- 00-0017-NI/MAIN - Leadership Development Program
- 00-0018-NI - 5481900-05-4230200 (CBC) Nov5-10,00
- 00-0018-NI/MAIN - Leadership Development Program

Transaction Range

- 2019
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008

Customer Level Filters

These filters allow you to filter at the customer attribute level.

Rank

- 0_Board
- 1_CEO
- 2_VP
- 3_Director
- 4_Manager
- 5_Technical
- 6_Admin
- 7_Student

Industry

- Agriculture, Forestry, Fishing
- Construction
- Finance, Insurance, Real Estate
- Manufacturing
- Mining
- Public Administration
- Retail Trade
- Services
- Transportation, Communications, Elect...
- Wholesale Trade

Interest

- CBA - Consumer & Business Confidence
- CDN - Canadian Economics
- COMP - Compensation
- CSEP - Socio Economic Performance
- CSR - Corporate Social Responsibility
- EDUC - Education and Learning
- FIN - Corporate Finance
- GOV - Governance
- HE - Health
- HR - Human Resources
- HW - Health & Wellness
- IMM - Immigration
- INNOV - Innovation & Tech
- INT - International Economics
- ISE - Industry Economics
- LD - Leadership Development
- MET - Metro Economics
- MKTG - Marketing
- NAP - Northern & Aboriginal Policy
- OE - Organizational Excellence
- POL - Energy, Environment & Transportation Policy
- PRO - Provincial Economics
- RM - Risk Management
- SEC - National Security

Lifecycle Stage

- a_Lead
- b_Acquired
- c_Retained
- d_Lapsing
- e_Lapsed

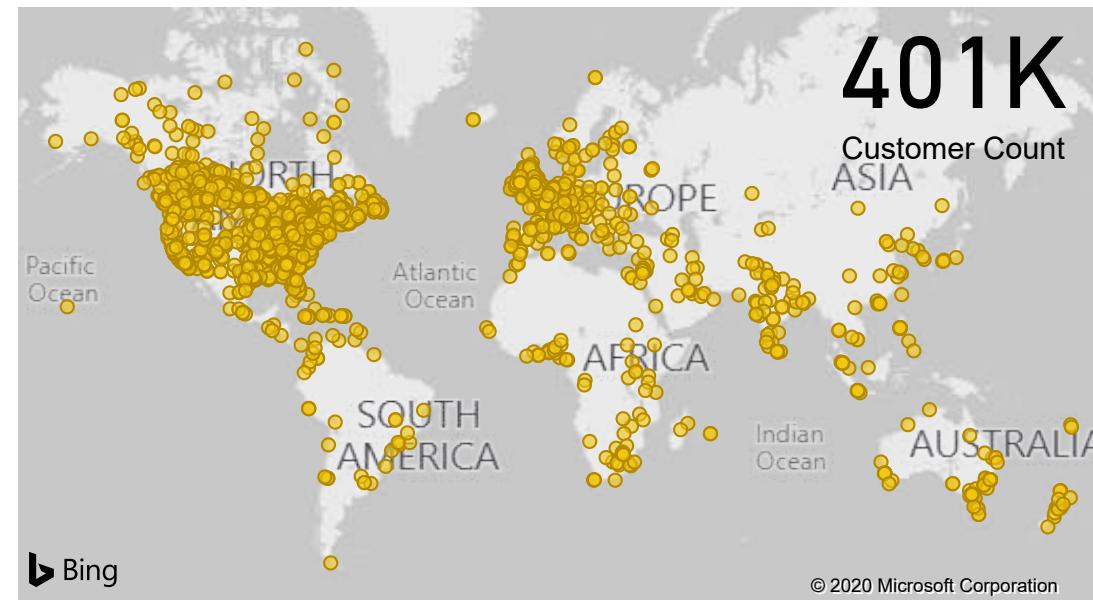
Function

- Business Corporate
- Communications
- Economics
- Education
- Finance and Risk Management
- Governance and Legal
- Human Resources
- Library/Resource Centre
- Marketing and Sales
- Operations and Manufacturing
- Policy
- Technology

Email Status

- a_Fully Emailable
- b_No Solicit Emailable
- c_Not Emailable

Customer Distribution



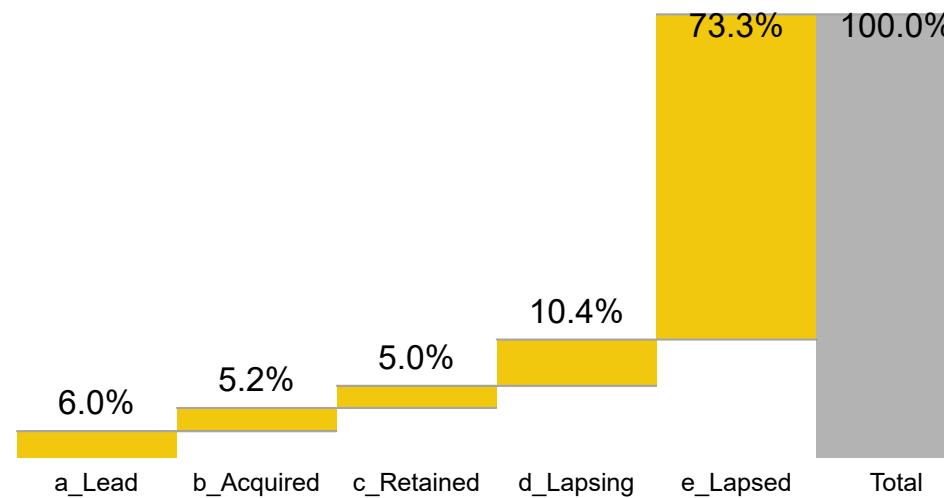
Rank & Email Status

Rank	a_Fully Emailable	b_No Solicit Emailable	c_Not Emailable	Total
0_Board	1,517	5,888	828	8,233
1_CEO	4,887	18,973	4,937	28,797
2_VP	8,312	21,169	6,174	35,655
3_Director	12,705	35,176	10,253	58,134
4_Manager	13,021	46,759	16,029	75,809
5_Technical	21,280	86,722	28,150	136,152
6_Admin	3,520	17,134	5,620	26,274
7_Student	2,451	24,484	5,363	32,298
Total	67,693	256,305	77,354	401,352

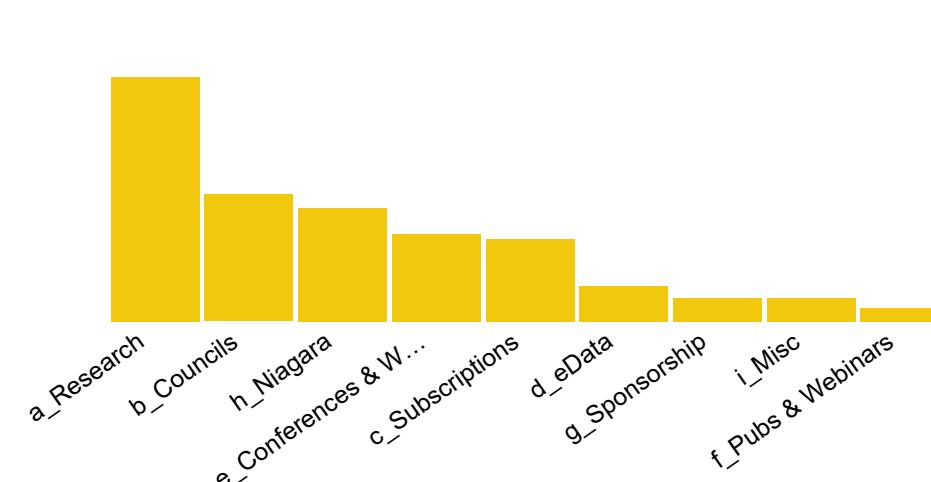
Customer Count by City



Lifecycle Funnel



Customer Consumption (\$) by Product Group



ID	Salutation	First Name	Last Name	Company	Title	City	Province	Country	Zip	Consent Type	Email	Work Phone
1000004	Ms.	Morah	Fenning	Ontario Ministry of Tourism, Cul...	Assistant Deputy Minister	Toronto	ON	Canada	M7A 2E2	5_NoConsent	morah.fenning@onta...	416-325-2...
1000005	Ms.	Jay-Ann	Fordy	Coast Capital Savings Federal ...	Chief Human Resources Offi...	Surrey	BC	Canada	V3R 8P7	4_NoSolicitation	jay-ann.fordy@coast...	604-517-7...
1000011	Mr.	Rob	Johnston	Apache Canada Ltd.	Exploitation Manager	Calgary	AB	Canada	T2P 3V4	4_NoSolicitation	rob.johnston@apach...	403-261-1...
1000013	Ms.	Gina	Delimari	British Columbia Office of the P...	Special Advisor	Victoria	BC	Canada	V8W 9V1	3_NeverContact	gina.delimari@gov.b...	250-953-5...
1000014	Mr.	Todd	Izuka	TELUS Sourcing Solutions	Business Analyst	Saanichton	BC	Canada	V8M 2A5	3_NeverContact	Todd.Izuka@TELUS....	250-544-5...
1000018	Mr.	Jeff	Nezon	Lucent Canada	Area Vice-President, Custo...	Markham	ON	Canada	L3R 4G5	5_NoConsent	jnezon@lucent.com	905-943-5...
1000021	Ms.	Krystyna	Bienkiewicz	Boehringer Ingelheim (Canada)...	Project Manager, Regulatory...	Burlington	ON	Canada	L7L 5H4	5_NoConsent		905-631-4...
1000024	Mrs.	Judy	Krushen	National Defence	Management Services Officer	Winnipeg	MB	Canada	R3J 3Y5	5_NoConsent	judy.krushen@forces...	204-833-2...
1000027	Ms.	Patti	Robichaud	Golden Giant Mine	Administrative Assistant, Hu...	Marathon	ON	Canada	P0T 2E0	5_NoConsent		807-238-1...
1000028	Mr.	Ken	Jacobs	Indigenous and Northern Affairs...	Issue Management Officer	Curve Lake	ON	Canada	K0L 1R0	5_NoConsent	ken.jacobs@aadnc-a...	705-657-2...
1000034	Mrs.	Annette	Troudeau	Compass Minerals Int.	Director, Purchasing	Goderich	ON	Canada	N7A 3Y9	3_NeverContact	troudeau@compass...	519-524-8...
1000035	Mr.	Terrence	Allen	Bank of Nova Scotia Jamaica Ltd.	Manager	Kingston		Jamaica		5_NoConsent	tallen@jamaica.scoti...	876-922-1...
1000036	Mr.	Egerton	Anderson	Bank of Nova Scotia Jamaica Ltd.	Manager	Montego Bay	St. James	Jamaica		5_NoConsent	eanderson@jamaica....	876-952-4...
1000037	Ms.	Joan	Badson-Mi...	Bank of Nova Scotia Jamaica Ltd.	Senior Operations Officer	Savanna-La...	Westm...	Jamaica		5_NoConsent	jmignott@jamaica.sc...	876-955-2...
1000038	Ms.	Guylaine	Dupuis	Belron Canada Inc.	Call Centre Director, Claims ...	Montréal	QC	Canada	H1Z 3T6	3_NeverContact	gdupuis@belroncana...	514-593-7...
1000039	Ms.	Courtney	Steven	Queen's Landing Inn and Confe...	Catering Supervisor	Niagara On ...	ON	Canada	L0S 1J0	5_NoConsent		905-468-2...
1000040	Monsieur	Jacques	Bouliane	Société Radio-Canada	Coordonnateur	Montréal	QC	Canada	H2L 2M2	3_NeverContact	jacques.bouliane@ra...	514-597-7...
1000043	Mr.	Ray	Bristol	Canadian Broadcasting Corpor...	Plant Manager	Sackville	NB	Canada	E4L 1G6	5_NoConsent		506-536-2...
1000047	Mr.	David	Horyl	Radio-Canada International	Assistant Plant Manager	Sackville	NB	Canada	E4L 1G6	5_NoConsent	horyld@nbnet.nb.ca	506-536-2...
1000048	Monsieur	Jean	Larin	Canadian Broadcasting Corpor...	Directeur administratif	Montréal	QC	Canada	H2L 2M2	4_NoSolicitation	jean_larin@radio-ca...	514-597-7...
1000051	Ms.	Elzbieta	Olechowska	Canadian Broadcasting Corpor...	Manager	Montréal	QC	Canada	H2L 2M2	3_NeverContact	eolechowska@montr...	514-597-7...
1000057	Mr.	Brian	Baran	Benjamin Moore & Co. Ltd.	Banner Manager, Western R...	Aldergrove	BC	Canada	V4W 3V6	5_NoConsent	brian.baran@benjam...	604-857-0...
1000058	Ms.	Josée-Ann	Cloutier	Benjamin Moore & Co. Ltd.	National Events Coordinator	Montréal	QC	Canada	H1Z 3H3	5_NoConsent		514-321-3...
1000059	Ms.	Karen	Cullen	Loyalist College of Applied Arts ...	Director, Human Resources	Belleville	ON	Canada	K8N 5B9	5_NoConsent	kcullen@loyalistic.on.ca	613-969-1...
1000060	Ms.	Sharon	Duchynecz	Benjamin Moore & Co. Ltd.	Office/Customer Service Ma...	Aldergrove	BC	Canada	V4W 3V6	5_NoConsent		604-857-0...
1000061	Mr.	Doug	Funston	Benjamin Moore & Co. Ltd.	Regional Sales and Marketin...	Toronto	ON	Canada	M6N 1G9	5_NoConsent	doug.funston@benja...	416-766-1...
1000065	Mr.	Dave	Haigh	Benjamin Moore & Co. Ltd.	General Manager, Central R...	Toronto	ON	Canada	M6N 1G9	4_NoSolicitation	d.haigh@benjaminm...	416-766-1...
1000066	Mr.	Nick	Harris	Benjamin Moore & Co. Ltd.	National commercial Develo...	Toronto	ON	Canada	M6N 1G9	5_NoConsent	n.harris@benjaminm...	416-766-1...
1000067	Mr.	Peter	Hendry	Benjamin Moore & Co. Ltd.	Strategic Account Manager	Toronto	ON	Canada	M6N 1G9	3_NeverContact	pdhendry@sympatic...	416-766-1...
1000068	Ms.	Rita	Hunter-Dun...	Benjamin Moore & Co. Ltd.	Regional Retail Developmen...	Toronto	ON	Canada	M6N 1G9	5_NoConsent	r.hunter-dunne@benj...	416-766-1...
1000069	Mr.	Mark	Hodge	Benjamin Moore & Co. Ltd.	General Manager, Western ...	Aldergrove	BC	Canada	V4W 3V6	5_NoConsent	m.hodge@benjamin...	604-857-0...
1000070	Ms.	Vicki	Iacovazzi	Benjamin Moore & Co. Ltd.	Business Development Man...	Toronto	ON	Canada	M6N 1G9	5_NoConsent		416-761-1...
1000072	Mr.	Brian	Mason		Commercial Sales Manager,...	Langley	BC	Canada	V3A 8C3	5_NoConsent	MasonInc@telus.net	604-530-4...
1000074	Mr.	Seema	Pabari	Benjamin Moore & Co. Ltd.	Project Manager	Toronto	ON	Canada	M6N 1G9	3_NeverContact	s.pabari@benjaminm...	416-766-1...
1000077	Mr.	Ronald	Reiniger	Benjamin Moore & Co. Ltd.	Business Development Man...	Langley	BC	Canada	V4W 3V6	5_NoConsent	ron.reiniger@benjam...	604-857-0...
1000078	Mr.	Robert	Ross	Benjamin Moore & Co. Ltd.	Marketing Manager	Toronto	ON	Canada	M6N 1G9	5_NoConsent		416-766-1...

Corporate NPS & CSAT

Customer Survey

Wave 3
OCT 2019 - JAN 2020

Customer Data & Analytics
Ramsey Abdel

Agenda

Overview

Analysis techniques

Corporate survey scores

- Trending scores
- Retention Quadrants – combining NPS & CSAT
- Qualitative themes and comments
- Key words and phrases

Post-experience scores

- Trending scores
- Qualitative themes and comments
- Key words and phrases

Overview and Approach



The following is a summary and analysis of the most recent Net Promoter Score (NPS) & Customers Satisfaction (CSAT) survey. The approach assesses the NPS and CSAT survey's quantitative scores and qualitative comments.

Scores

How are our customers scoring us on CSAT and NPS and how has that changed over time?

CSAT: Customer Satisfaction Score (0 to 5)

A measure of satisfaction levels for products/services.

NPS: Net Promoter Score (-100 to 100)

A measure of general customer loyalty. Customers are grouped into promoters, passives, or detractors and NPS is calculated as:

$$\text{NPS} = (\text{Number of Promoters} - \text{Number of Detractors}) / (\text{Number of Respondents}) \times 100$$

Comments

Customers given an opportunity to provide additional context behind their scores

Both CSAT and NPS comments have been objectively scored for “positive”, “neutral”, or “negative” elements using a Sentiment Analysis called **VADER** (Valence Aware Dictionary and sEntiment Reasoner). From there, the CSAT and NPS comments are grouped using a technique called **n-Gram clustering**, which allows us to group comments based on their similarities, which allows us to append general themes to groups of similar comments.

Survey Questions



CSAT Questions

- Overall, in the last 12 months, how satisfied have you been with your experience with The Conference Board of Canada and/or their associated organization, The Niagara Institute?

Highly Satisfied

Satisfied

Neither Satisfied nor Dissatisfied

Dissatisfied

Highly dissatisfied

Don't Know

- Please briefly describe why you gave The Conference Board of Canada and/or their associated organization, The Niagara Institute the above satisfaction rating.

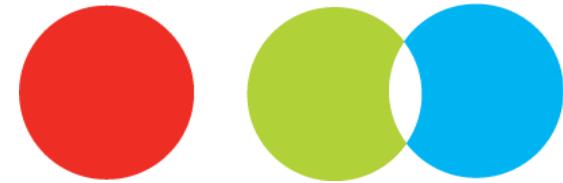
NPS Questions

- How likely is it that you would recommend The Conference Board of Canada and/or their associated organization, The Niagara Institute to a friend or colleague?

(Scale 0 to 10, 0 being Not at all Likely, 10 being Extremely Likely)

- Please briefly describe why you gave the above rating

Overview of New Analysis Techniques



n-Gram Clustering

'n-grams' are co-occurring clusters of words, where "n" is the number of common words that drives the grouping. In this analysis, comments have been grouped based on n-grams (clusters) where n = 5. By looking at clusters of words (rather than individual) we are able to group a large volume of comments into higher level themes. This reduces the time spent analyzing data, increases the objectivity of the analysis, and also highlights themes that otherwise may have been missed.

VADER (Valence Aware Dictionary and sEntiment Reasoner)

VADER is a sentiment analysis technique that leverages combinations of words, phrases, or expressions to score comments as positive, neutral, or negative. Using this technique, sentiments no longer need to be classified as 100% positive, neutral, or negative.

VADER in action (comment scoring example) –

Scoring Method	Negative	Neutral	Positive
Previous (subjective)	0%	100%	0%
VADER (objective)	0%	84%	16%

"Satisfied, but sometimes the data doesn't apply to my industry"

Historically, we would have subjectively classified this comment as neutral and more/less pushed it aside. By applying VADER within the analysis, we now see that there are positive elements to the comment and would also spend more time interpreting the contents of the comment now that we know that neutral comments are correlated to negative scores.

Survey x VADER Scoring Correlation

Measure	Positive VADER	Neutral VADER	Negative VADER
CSAT	21%	-16%	-13%
NPS	31%	-25%	-16%

- A high NPS or CSAT score *should* be accompanied by a positive comment and vice versa
- Predictably, high NPS/CSAT scores are positively correlated (vice versa also true)
- Neutral scored comments are correlated to lower NPS and CSAT scores
- This implies that customers will comment in a relatively neutral fashion, despite giving us lackluster quantitative survey scores

Corporate Survey

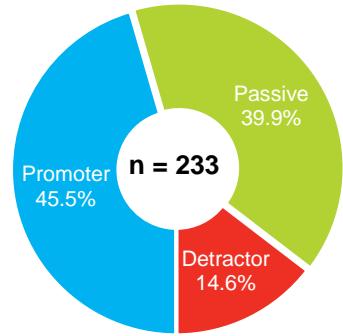
NPS & CSAT

- NPS and CSAT scores
- Highlighted NPS and CSAT themes
- What are our customers saying? (common words and phrases)
- Combining NPS and CSAT scores (creating Retention Quadrants)
- Summary of insights

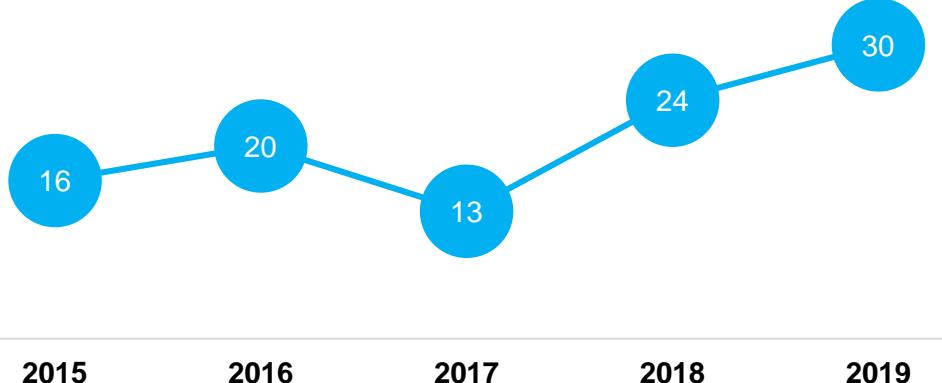
NPS – Overall & Historical



31
Overall NPS
September 2019 Survey

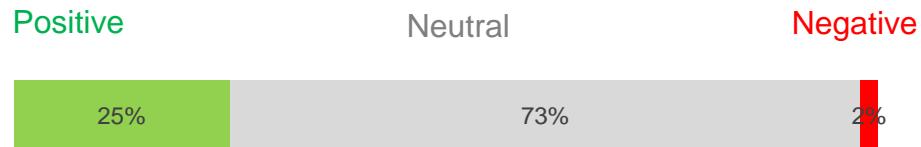


Blended Annual Net Promoter Score



Note: 2019 only reflects 2 waves of surveying

Sentiment Score



- The current NPS of 31 from September considered ‘good’ – any score above 0 implies that we have a positive promoter-detector ratio
- The high volume of passive scores leave room for improvement – customers can go either way in the future
- The blended NPS of 30 is healthy when compared to historical baseline
- By transitioning to a new method of scoring sentiment (VADER), we define levels of positivity, neutrality, and negativity for comments. NPS comments are generally 25% positive, which reflects a slight drop from last survey (previously 27%).

Highlighted Themes (NPS)

NPS comments were scored using VADER and grouped into higher level themes using n-gram clustering. From here, we can isolate the most positive vs. neutral/negative themes to understand.



Positive Themes

CBOC Excellent Resources A general positive reaction to the CBOC generated around the e-Library, webinars, and research.

Significant Topics Many of the comments have highlighted positively the importance of the topics discussed and debated whether in research or at the events level.

Reliable Information CBOC as a source of information was unquestionable and has been praised for its robustness and reliability. Monthly reports were sent in a timely manner and the quality of information have been described as clear, straightforward and informative.

Conferences, Webs and Training Value CBOC Conferences have provided strong and relevant insights for its Attendees. Surveyed customers reacted positively in their feedback when commenting on the insights generated through CBOC conferences, webs and the associated workshops and training sessions.

General Experience Reflections The CBOC customers have shared their personal reflections on several CBOC products mainly around the conferences and network opportunities. Generally they are satisfied around quality consistency and value.

Neutral/Negative Themes

Price and Membership Fees Customers cite high conference pricing in comments (which are relatively neutral in delivery) as well the membership fees. As noted earlier, neutral comments are correlated to negative NPS and CSAT scores.

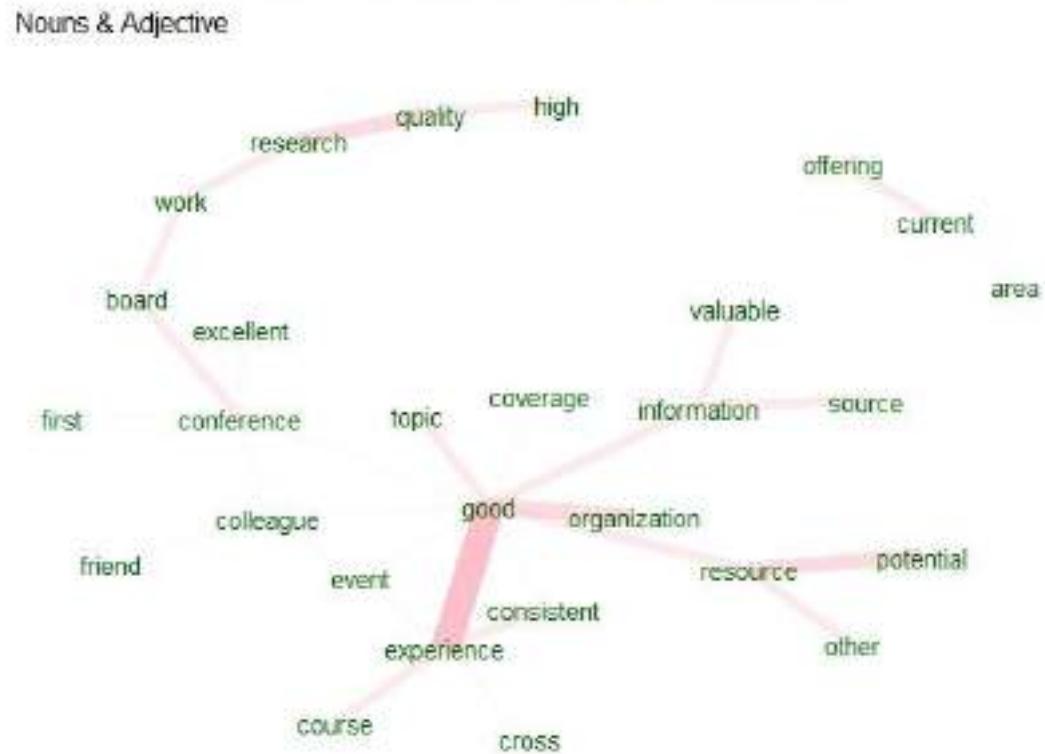
Recommending CBOC Although recommending CBOC have many positive elements in the comments towards recommending CBOC, the customers have shared implicitly notions of hesitation within those comments. This resulted in high neutrality score which is above the anticipation of such important theme.

NPS Word Cloud and Cooccurrences

(will rework this title)



NPS Words Cooccurrences within sentence



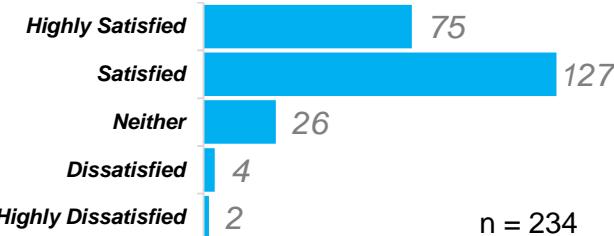
NPS WordCloud - Wave 3



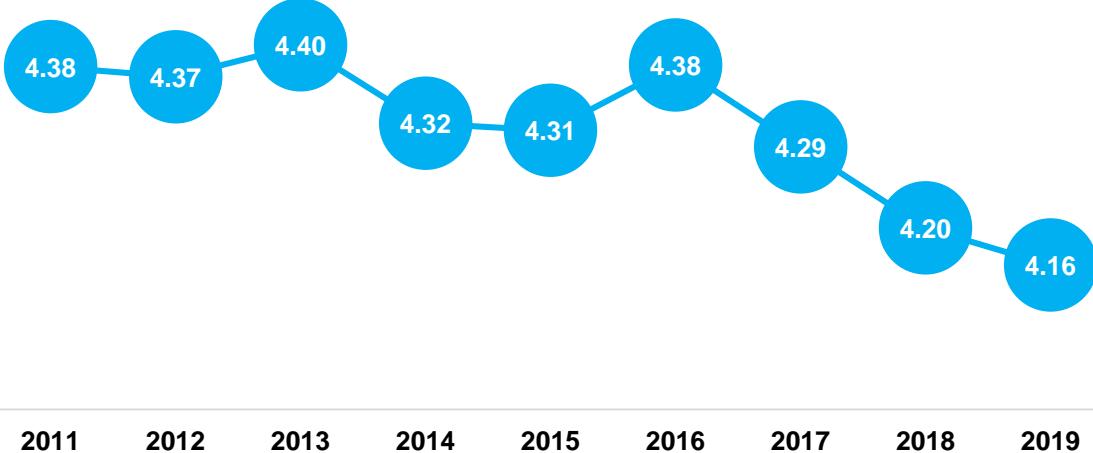
CSAT – Overall & Historical

4.15

Overall CSAT Score
September 2019 Survey

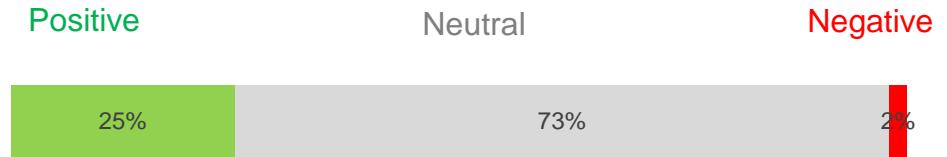


Blended Annual Customer Satisfaction Score



Note: 2019 only reflects two waves of surveying

Sentiment Score



- CSAT dropped to 4.15 this wave after a wave of 4.2 – this is a relatively low score compared to our historical baseline
- Concentrated scores around 4 (Satisfied) prevents the aggregate from reaching higher levels – while we're leaving customers satisfied, we aren't achieving excellence with our offerings
- CSAT comments are generally 25% positive, which reflects a slight improvement from last survey (previously 24%).

Highlighted Themes (CSAT)

CSAT comments were scored using VADER and grouped into higher level themes using n-gram clustering. From here, we can isolate the most positive vs. neutral/negative themes to understand.



Positive Themes

Quality of Meetings Meetings are being described as highly interactive with overall satisfaction towards the frequency of said meetings.

Presenters & Speakers Customers outlined CBOC presenters as high caliber with good presentation skills. They reflected also on how well the speakers were organized and influential during the events.

Value of Information This theme relates to the trusted quality of the timely information and statistics as well as the reliability of the insights and data sources.

Content Satisfaction This theme had the highest volume of comments that positively spoke to the content of events, research, and networks as they praised relevancy and value of the content to their fields.

Research Value This theme revolves around customers' satisfaction around the research value driven by networks in terms of quality and relevancy.

Neutral/Negative Themes

Cost of Membership This theme have received negative and neutral feedback as most of the comments showed concerns around the value-added in return of the fees and membership rights.

CBOC Communication This theme has a split of opinions among customers. While some comments praised the content of emails, Negative feedback was centered around emails being 'too' frequent or 'limited' value.

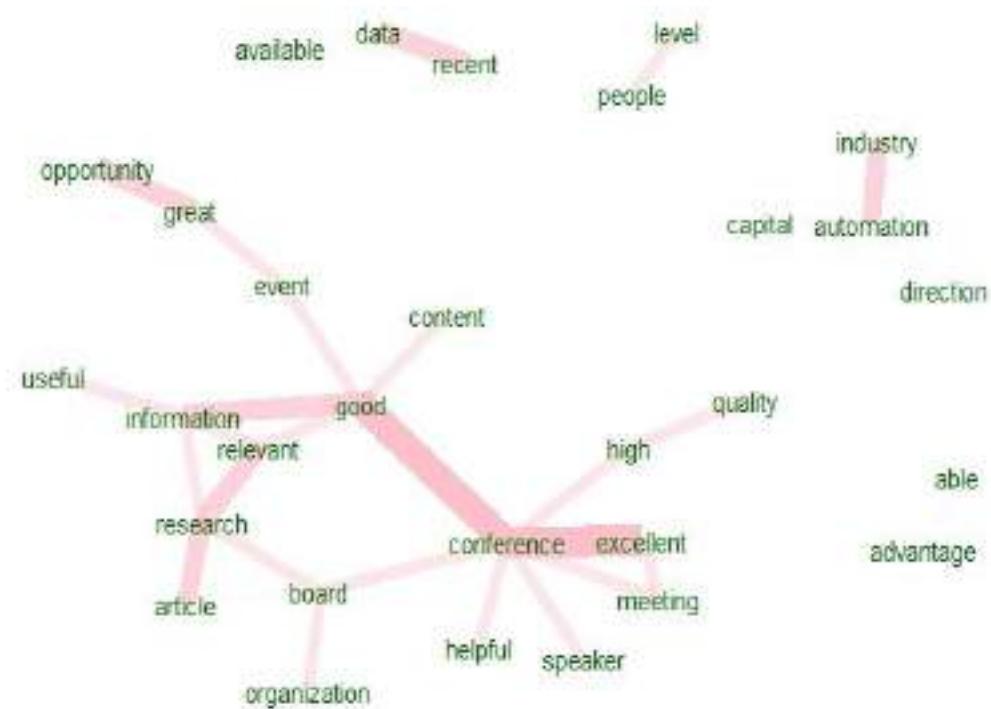
CSAT Word Cloud and Cooccurrences

(will rework this title)



CSAT Words Cooccurrences within sentence

Nouns & Adjective



CSAT WordCloud - Wave 3



Retention Quadrants (Combining NPS & CSAT)

Loyalty and satisfaction are early indicators of customer retention. Increased NPS and CSAT scores lead to a better customer experience – and a better customer experience drives higher retention rates.

By combining NPS & CSAT we can segment customers into the following actionable retention quadrants;

A. Advocates (53%) “Keep doing what we’re doing”

Advocates are loyal and satisfied with CBOC products and experiences. They are very likely to recommend CBOC to their networks.

B. Wildcards (35%) “Requires attention”

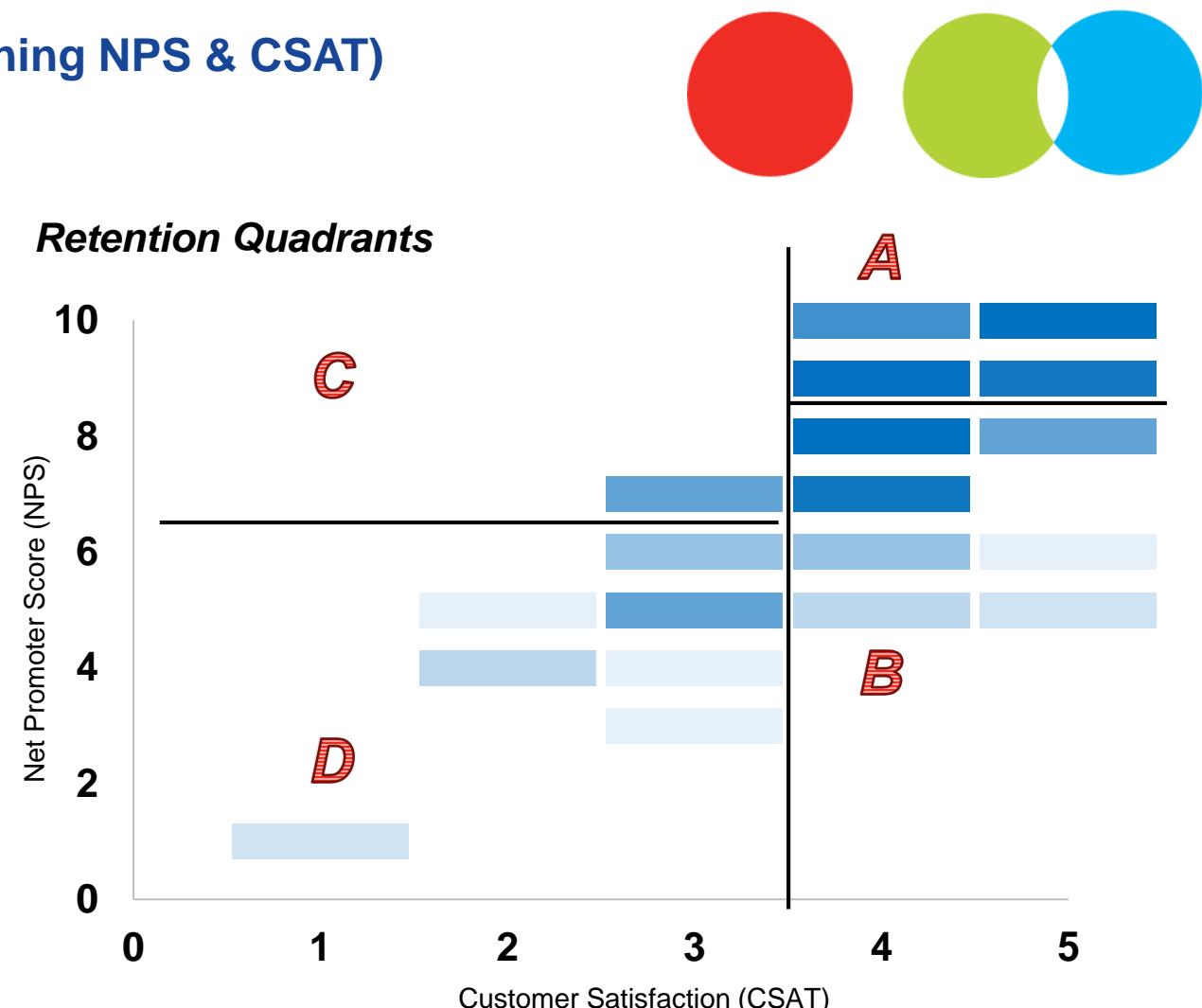
Wildcards are satisfied but relatively disloyal customers. The low NPS scores for these customers imply that there is high risk of churn.

C. 2nd-Chancers (3%) “Mend the relationship”

These are relatively loyal customers but have suffered a bad experience with CBOC. Because they are still mostly willing to recommend CBOC, there's opportunity to save these customers and push them up to the Advocate level.

D. Wasteland (9%) “Let them go”

These customers are at the highest risk of churn. They are not satisfied or loyal and it may not be worth investing much efforts to retain them.



Note: Reflects respondents who answered both NPS & CSAT questions (not all survey participants answered both questions)

Summary of Insights



- Overall NPS trending up, now at 31 (46% promoters vs. 15% detractors)
 - Overall NPS being heavily supported by customers who have purchased publications (NPS of 39) and subscriptions (NPS of 45)
 - Overall NPS being dragged down by a relatively low NPS of 12, from customers who have consumed contract research
- CSAT drops to 4.15, previously at 4.24 last wave
 - Subscriptions is the only product line where customers are generally ‘highly satisfied’
 - All other product lines skew toward to just ‘satisfied’
- More than half (53%) of our survey participants are full fledged ‘Advocates’ – satisfied and would recommend
- Another 35% survey participants are classified as ‘Wildcards’ – generally satisfied, but wouldn’t necessarily recommend – this is the group we need to win over
- The remaining participants are either ‘2nd-chancers’ or ‘Wasteland’ customers – this relatively low population shouldn’t warrant a lot of our attention
- Neutral comments are tied to negative scores – so neutral comments shouldn’t be omitted/ignored
- Pricing and cost issues come up as a relatively common negative theme for both NPS and CSAT
- Pricing and cost issues as a negative theme potentially being offset by our strong positive themes of quality content and research, namely around healthy workplaces

Post-Experience

NPS & CSAT

For Conferences & Council meetings:

- NPS and CSAT scores
- Highlighted themes
- What are our customers saying? (common words and phrases)
- Summary of insights

Conferences Themes

Conferences comments were scored using VADER and grouped into higher level themes using n-gram clustering. From here, we can isolate the most positive vs. neutral/negative themes to understand.



Positive Themes

Quality of Speakers CBOC have been praised for its selection of high caliber speakers with good presentation skills. The reflection also described how well the speakers were organized and influential during the events.

Sessions Coordination and Facilities This volume of comments spoke positively to the tools used for presentations (such as the microphones, room space, and MS Power Point slides) as well as location.

Session Content Satisfaction This theme spoke positively the content of events as praised relevancy and delivery of material of the content to their fields.

Session Time This theme revolves around customers' satisfaction around the dedicated time for the sessions as well as the break times and events agendas.

Neutral/Negative Themes

Price and Fees Some comments cite high conference pricing (which are relatively neutral in delivery). As noted earlier, neutral comments are correlated to negative NPS and CSAT scores.

Conferences Word Cloud and Cooccurrences

(will rework this title)



Conference Comments Keywords COOC

Nouns & Adjective



Council meetings



Councils surveys have three fields for customers to reflect on and provide their comments: **Enjoyed-Most**, **Enjoyed-Least**, and **General-Comments**.

Due to the nature of the comments, both fields (Enjoyed-Most and Enjoyed-Least) have been considered as themes that reflect the audience enjoyment impression and personal experiences of the meetings' attributes they mostly enjoyed or the least enjoyed during the conferences.

The General-Comment field has been treated as the general experience and overall impression of the audience over the councils meetings and performance.

All comments were scored using VADER and grouped into higher level clusters using words frequency and cooccurrence.

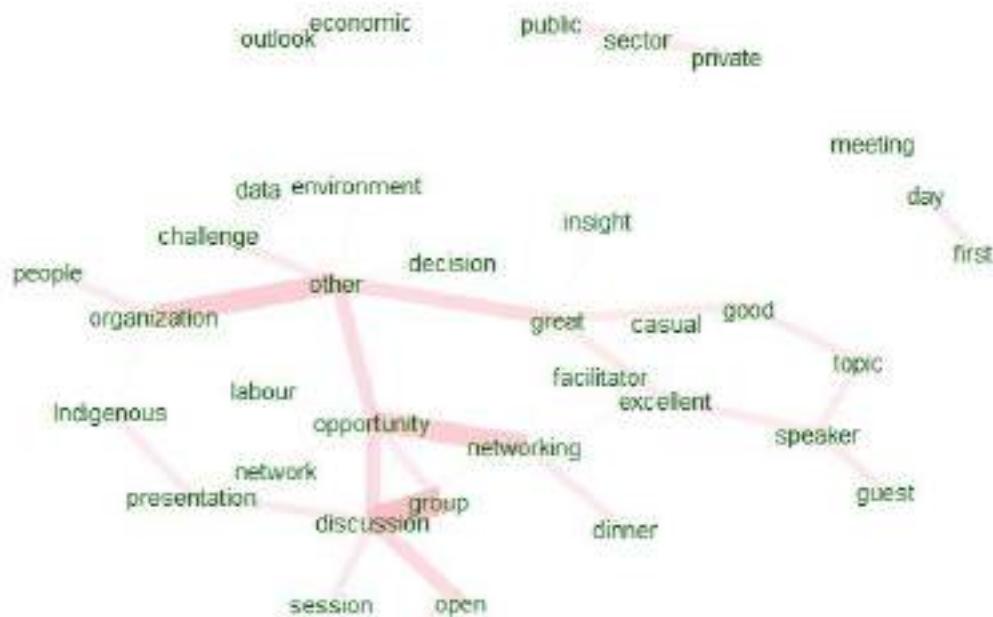
Councils ‘Most Enjoyed’ Feedback

Councils ‘Most Enjoyed’ themes have been clustered by the words cooccurrence frequency.



COUNCILS ENJOY MOST KEYWORDS COOC

Nouns & Adjective



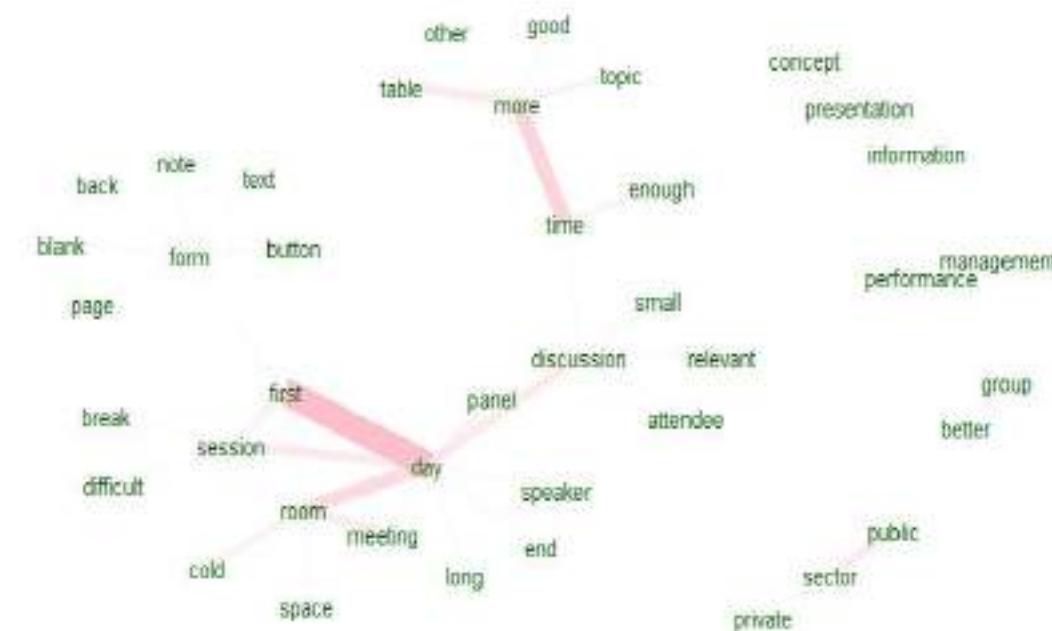
Councils ‘least Enjoyed’ Feedback

Councils ‘Least Enjoyed’ themes have been clustered by the words cooccurrence frequency.



COUNCILS ENJOY LEAST KEYWORDS COOC

Nouns & Adjective



Councils Comments

Councils ‘Comments’ keywords have been clustered by the words cooccurrence frequency.



COUNCILS COMMENTS KEYWORDS COOC

Nouns & Adjective



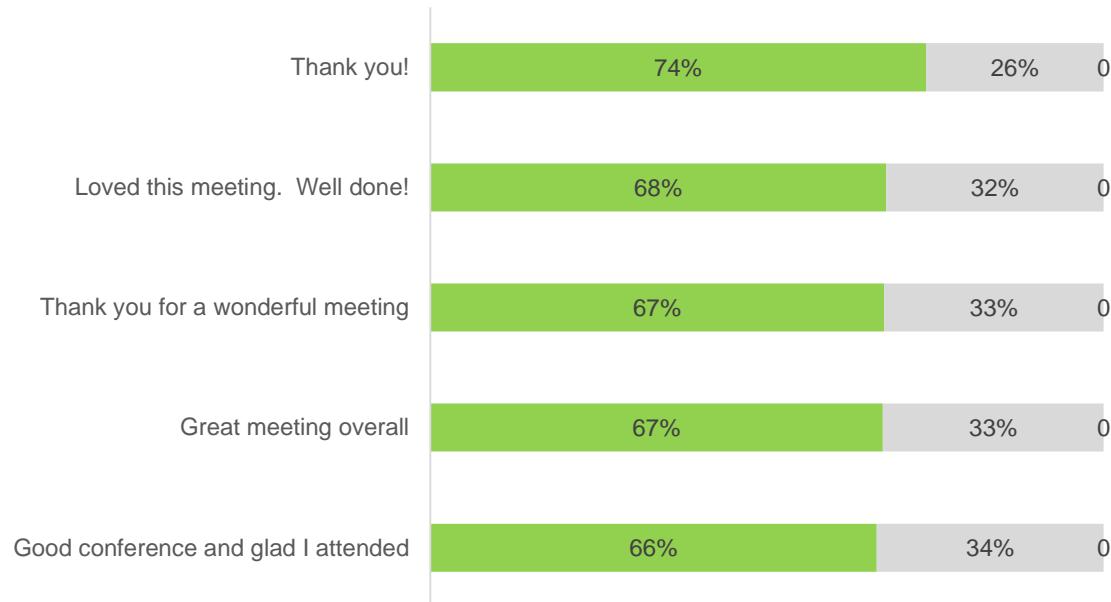
meeting great session time thank make
value topics meetings done agenda
work can conference first Council future
just like found well see good perhaps
members group experience best days

Councils Comments

Councils Top Positive and Neutral/Negative Comments.

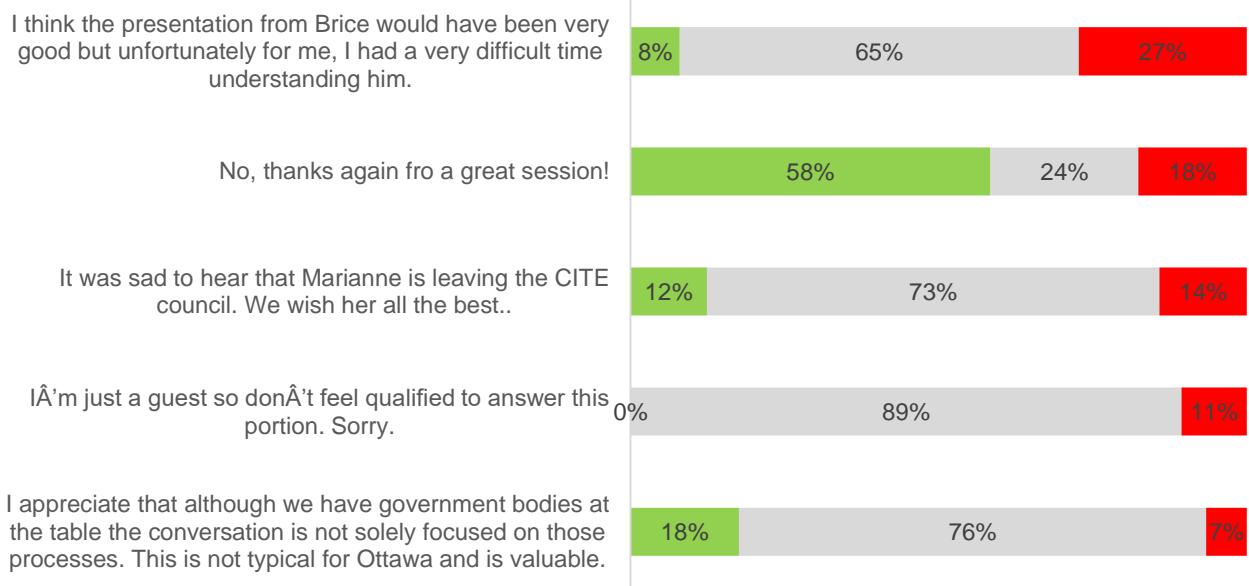


TOP POSITIVE COMMENTS



■ pos ■ neu ■ neg

TOP NEGATIVE/NEUTRAL COMMENTS



■ pos ■ neu ■ neg

Councils 'Topic Themes'

Councils also surveyed the audience best future 'Topic-Themes'. The themes have been clustered by the words cooccurrence frequency.



COUNCILS TOPICSTHemes KEYWORDS COOC

Nouns & Adjective

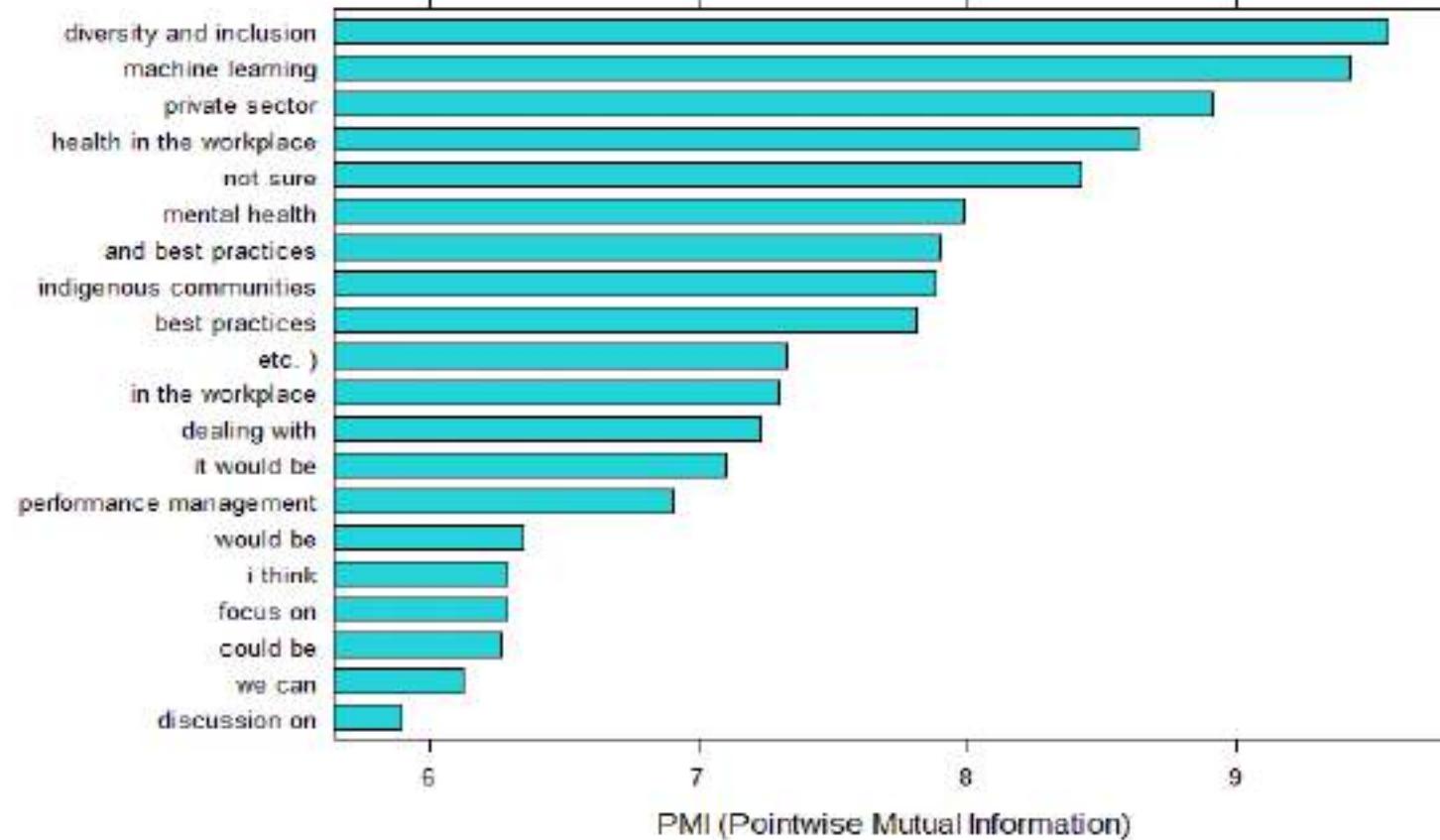


Councils 'Topic Themes'

Councils also surveyed the audience best future 'Topic-Themes'. The themes have been clustered by the phrase cooccurrence frequency.



COUNCILS TOPICSTHemes TOP PHRASES



Appendix

Individual NPS and CSAT comments
Ranked by score – highest to lowest
Sentiment Analysis Scores

R Code

NLP Approach

```

#Start by installing the necessary packages
install.packages("tm")
library(tm)
install.package("NLP")
library(NLP)
install.packages("tokenizers")
library(tokenizers)
install.package("golem")
library(golem)
install.package("wordcloud")
library(wordcloud)
install.package("stopwords")
library(stopwords)
#Set the working directory
getwd()

#set the working directory
setwd("~/Customer Data & Analytics/NPS & CSAT - Corporate Survey/Ramsey/NPS NLP Project - 2020-02-10")

#Load .txt data with the following command:
CS_Comments_text <- readLines("CSAT_Comments.txt", encoding = "UTF-8")

#Appending the file to CS_Comments_text like this produces a vector of strings, one per line
#Let's look at what's in the first few lines of the file we just appended into the variable we just created called 'CS_Comments_text'
head(CS_Comments_text, 1)

#####
##### Terms Frequency
##### Using a new package called tokenizers

CS_Comments_token <- tokenize_word(CS_Comments_text, lowercase = TRUE, stopwords = NULL, strip_punct = TRUE, strip_numeric = FALSE, simplify = FALSE)

#Next, we create a document term matrix or 'tdm'
#A document-term matrix or term-document matrix is a mathematical matrix that describes the frequency of terms that occur in a collection of words.

CS_Comments_token_tdmCreator <- function(CS_Comments_token, stemDoc = T, rmStopwords = T){

  tdm <- Corpus(VectorSource(CS_Comments_token))
  if(isTRUE(isDuplicated(tdm))){
    tdm <- tm_map(tdm, removeWords, stopwords())
  }
  if(isTRUE(isDocument(tdm))){
    tdm <- tm_map(tdm, stemDocument)
  }
  tdm <- TermDocumentMatrix(tdm,
                           control = list(dictionaryLength = c(1, Inf)))
  tdm <- rowSums(as.matrix(tdm))
  tdm <- sort(tdm, decreasing = T)
  d <- data.frame(tdm)
  return(d)
}

CS_Comments_token_tdmCreator <- CS_Comments_token_tdmCreator(CS_Comments_token)

#####
##### Barplot
##### Check the dimensions of the data
dim(CS_Comments_token_tdmCreator)

#Selects the 25 most used words.
CS_Comments_top_25 <- CS_Comments_token_tdmCreator[3:28]

#Create a bar chart to visualize the frequency of different words
#The coord_flip() function allows us to see the labels
CS_Comments_top_25

CS_Comments_token_plot <- ggplot(CS_Comments_token_top_25, aes(x = reorder(term, freq), y = freq)) +
  geom_bar(stat = "identity", fill = "#e6f2ff") +
  xlab("Top 25") + ylab("Words Frequency of CS Comments") +
  coord_flip() + theme_minimal() + scale_x_discrete("bold") +
  CS_Comments_token_plot

#Compare These Comments with NPS Comments
#####
##### Second TdM
##### Barplot
##### Get dimensions
getwd()

#Load .txt data with the following command:
NPS_Comments_text <- readLines("NPS_Comments.txt", encoding = "UTF-8")
head(NPS_Comments_text, 10)

NPS_Comments_text_token <- tokenize_word(NPS_Comments_text, lowercase = TRUE, stopwords = NULL, strip_punct = TRUE, strip_numeric = FALSE, simplify = FALSE)

NPS_Comments_token_tdmCreator <- function(NPS_Comments_text_token, stemDoc = T, rmStopwords = T){

  tdm <- Corpus(VectorSource(NPS_Comments_text_token))
  if(isTRUE(isDuplicated(tdm))){
    tdm <- tm_map(tdm, removeWords, stopwords())
  }
  if(isTRUE(isDocument(tdm))){
    tdm <- tm_map(tdm, stemDocument)
  }
  tdm <- TermDocumentMatrix(tdm,
                           control = list(dictionaryLength = c(1, Inf)))
  tdm <- rowSums(as.matrix(tdm))
  tdm <- sort(tdm, decreasing = T)
  d <- data.frame(tdm)
  return(d)
}

NPS_Comments_token_tdmCreator <- NPS_Comments_token_tdmCreator(NPS_Comments_text_token)

#####
##### Barplot
##### Check the dimensions of the data
dim(NPS_Comments_token_tdmCreator)

#Selects the 25 most used words.
NPS_Comments_top_25 <- NPS_Comments_token_tdmCreator[1:24]

NPS_Comments_top_25

#Create a bar chart to visualize the frequency of different words
#The coord_flip() function allows us to see the labels
NPS_Comments_top_25_plot <- ggplot(NPS_Comments_top_25, aes(x = reorder(term, freq), y = freq)) +
  geom_bar(stat = "identity", fill = "#e6f2ff") +
  xlab("Top 25") + ylab("Words Frequency of NPS Comments") +
  coord_flip() + theme_minimal() + scale_x_discrete("bold") +
  NPS_Comments_top_25_plot

#####
##### CS Themes
##### Barplot
##### Tokenization
CS_Comments_themes <- tokenize_ngrams(CS_Comments_text, n = 5, n_min = 2,
                                         stopwords = stopwords("stopwords::en"))

CS_Comments_themes <- tokenize_ngrams(CS_Comments_text, n = 2, n_min = 2,
                                         stopwords = stopwords("stopwords::en"))

head(CS_Comments_themes, 10)

NPS_Comments_themes <- tokenize_ngrams(NPS_Comments_text, n = 5, n_min = 2,
                                         stopwords = stopwords("stopwords::en"))

#####
##### NLP Analysis
##### For documentation on https://cran.r-project.org/web/packages/udpipe/udpipe-use-case-parsing-lmmification.html
install.package("udpipe")
library("udpipe")

#### Detailed Linguistics Dataset
# udpipe::udpipe_load(modelName, modelLanguage = "english")
# udpipe::udpipe_load(modelId, modelFile, model)
# x <- udpipe::annotate_ud_model(x = CS_Comments_text)
# x <- udpipe::udpipe(x)

library(readr)
library(writexl)

write_xlsx("R:/Customer Data & Analytics/NPS & CSAT - Corporate Survey/Ramsey/NPS NLP Project - 2020-02-10/CSAT_Linguistics.xlsx")

#####
##### Parts of Speech
library(lattice)

stats <- tdt_freq$df
barcharKey <- freq.stats$df %>% group_by(key) %>% summarise(freq = sum(freq))
barcharKey %>% freq.stats %>% mutate(col = "codelblue",
  stat = "freq")

## NOUNS
stats <- subset(stats, upon %in% c("NOUN"))
stats <- freq.stats$df %>% group_by(key) %>% summarise(freq = sum(freq))
stats %>% factorize$key %>% levels %>% revalue(statKey)
barcharKey %>% freq.stats %>% head(20) %>% col = "codelblue",
  stat = "freq"

## ADJECTIVES
stats <- subset(stats, upon %in% c("ADJ"))
stats <- freq.stats$df %>% group_by(key) %>% summarise(freq = sum(freq))
stats %>% factorize$key %>% levels %>% revalue(statKey)
barcharKey %>% freq.stats %>% head(20) %>% col = "codelblue",
  stat = "freq"

## Using RAKE
#Frequency statistics of words are nice but most of the time, you are getting stuck in words which only make sense in combination with other words. Hence you want to find keywords which are a combination of words.
#RAKE (Rapid Automatic Keyword Extraction)
#Calculation ordering using Pointwise Mutual Information
#Parts of speech phrase sequence detection

stats <- keywords_rake(x = x, term = "lemma", group = "doc_id",

```

Python Code

Vader Sentiment Analysis

```

#-*- coding: utf-8 -*-
Created on Wed Feb 19 11:12:50 2020
@author: abdel
```
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
os.chdir(R"/Customer Data & Analytics/NPS & CSAT - Corporate Survey/Ramsey/NPS NLP Project - 2020-02-10")
CS_Comments = pd.read_csv("CSAT_Comments.csv", header=0, names=["Case", "CS_Comments"], encoding='latin-1')
CS_Comments_to_csv = CS_Comments.to_csv("CSAT_Comments.csv", encoding='latin-1')

NPS_Comments = pd.read_csv("NPS_Comments.csv", header=0, names=["Case", "NPS_Comments"], encoding='latin-1')
NPS_Comments_to_csv = NPS_Comments.to_csv("NPS_Comments.csv")

#####
CSAT Comments
Read CSV file
CS_Comments = open("CSAT_Comments.csv")
import sklearn.feature_extraction.text as text
This step performs the vectorization.
If it'sf, stop word extraction, and normalization.
It assumes doc is a Python list.
It assumes each document is a string.
And collects all its elements.
> text.TfidfVectorizer(CS_Comments, stop_words='english')
The tokens can be extracted as:
vocab = >.get_feature_names()
Now we perform the NMF with 20 topics
from sklearn import decomposition
num_topics = 30

def topic(doc):
 docTopic = np.array(decomposition.NMF(n_components = num_topics,
 init = 'random').fit_transform(text.TfidfVectorizer(CS_Comments).fit_transform(doc)))
 # Now, we loop through each row of the T matrix
 # And collect the top 25 words from each topic.
 # > top_words = 5
 # for topic in docTopic.components_:
 # id = np.argmax(topic) - 1
 # top_words[id] = topic[id]
 # topic.append(id)
 # Now we perform the NMF with 20 topics
from sklearn import decomposition
num_topics = 30

def topic(doc):
 docTopic = np.array(decomposition.NMF(n_components = num_topics,
 init = 'random').fit_transform(text.TfidfVectorizer(CS_Comments).fit_transform(doc)))
 # Now, we loop through each row of the T matrix
 # And collect the top 25 words from each topic.
 # > top_words = 5
 # for topic in docTopic.components_:
 # id = np.argmax(topic) - 1
 # top_words[id] = topic[id]
 # topic.append(id)
 NPS_CommentsThemes = pd.DataFrame(topic_words)
CS_CommentsThemes_to_csv = NPS_CommentsThemes.to_csv("CSAT_Comments_Themes.csv")

NPS_CommentsThemes = pd.DataFrame(topic_words)
CS_CommentsThemes_to_csv = NPS_CommentsThemes.to_csv("NPS_Comments_Themes.csv")

http://openstakik.com/2015/01/12/finding-key-themes-from-free-text-review/
#####
NPS
Read CSV file
NPS_Comments = open("NPS_Comments.csv")
import sklearn.feature_extraction.text as text
This step performs the vectorization.
If it'sf, stop word extraction, and normalization.
It assumes doc is a Python list.
It assumes each document is a string.
And collects all its elements.
> text.TfidfVectorizer(NPS_Comments, stop_words='english')
The tokens can be extracted as:
vocab = >.get_feature_names()
Now we perform the NMF with 20 topics
from sklearn import decomposition
num_topics = 30

def topic(doc):
 docTopic = np.array(decomposition.NMF(n_components = num_topics,
 init = 'random').fit_transform(text.TfidfVectorizer(NPS_Comments).fit_transform(doc)))
 # Now, we loop through each row of the T matrix
 # And collect the top 25 words from each topic.
 # > top_words = 5
 # for topic in docTopic.components_:
 # id = np.argmax(topic) - 1
 # top_words[id] = topic[id]
 # topic.append(id)
 NPS_CommentsThemes = pd.DataFrame(topic_words)
NPS_CommentsThemes_to_csv = NPS_CommentsThemes.to_csv("NPS_Comments_Themes.csv")

#####
VADER
from vaderSentiment.vaderSentiment import SentimentIntensityAnalyzer
analyzer = SentimentIntensityAnalyzer()

def sentiment_analyzer_scores(sentence):
 score = analyzer.polarity_scores(sentence)
 print("[" + str(len(score)) + "] [" + sentence + ", " + str(score) + "]")

sentiment_analyzer_scores("conferences value meetings like cost")

```

# Sales Tracker Project

## Stage One: Creating Sharepoint lists (Data Input/Entry)

| Sales_Rep            | Interaction Date | Org ID  | Organization  | Cust ID    | Customer Name | Tactic  | Purpose                     | Outcome             | Date of Sale | Product Group        |
|----------------------|------------------|---------|---------------|------------|---------------|---------|-----------------------------|---------------------|--------------|----------------------|
| Tracie Jones         | 11/8/2019        |         |               |            |               | Call    | Presentation / Pitch        | Next Step Scheduled |              | Publication          |
| Brendan Hayes        | 12/3/2019        | 123,456 | private1      | 12,345,678 | First1        | Email   | Presentation / Pitch        | Next Step Scheduled | 1/17/2020    | Contract Research    |
| Brendan Hayes        | 11/1/2019        |         | Acora Village |            | James Kenny   | Call    | First Touch / Introducti... | No Contact          |              | Enterprise           |
| Brendan Hayes        | 11/4/2019        |         | Acora Village |            | Dan Greenberg | Call    | First Touch / Introducti... | No Contact          |              | Sponsorship          |
| Brendan Hayes        | 11/4/2019        |         | Acora Village |            | James Kenny   | Email   | Presentation / Pitch        | Next Step Scheduled |              | Sponsorship          |
| Ann Marie Martello   | 12/3/2019        |         |               |            |               | Call    | First Touch / Introducti... | No Contact          |              | Other                |
| Catherine Labossiere | 12/3/2019        |         |               |            |               | Call    | First Touch / Introducti... | Next Step Scheduled |              | Publication          |
| Darrell Wiggins      | 12/3/2019        |         |               |            |               | Call    | Qualifying                  | No Contact          |              | Subscription (e-Lib) |
| Denise Ralph         | 12/3/2019        |         |               |            |               | Call    | First Touch / Introducti... | No Contact          |              | Conference           |
| Kitty Bentley        | 12/3/2019        |         |               |            |               | Call    | First Touch / Introducti... | No Contact          |              | Conference           |
| Virginia Campagna    | 12/3/2019        |         |               |            |               | Call    | First Touch / Introducti... | No Contact          |              | Conference           |
| Brendan Hayes        | 12/3/2019        | 1,234   | test          | 4,321      | test          | Call    | Enterprise                  | No Contact          | 11/1/2019    | Enterprise           |
| Ann Marie Martello   | 12/3/2019        |         |               |            |               | Meeting | Qualifying                  | Contact Made        |              | Enterprise           |

## Stage Two: SSMS Table Via SSIS Job to Store Data into SQL Server DB

| SalesRep      | InteractionDate         | OrgID | Organization                       | CustID  | CustomerName       | Tactic  | Purpose                    | Outcome             | DateofSale | ProductGroup                  | ProductDescription                                | Amount | PitchRevenue | Clo  |
|---------------|-------------------------|-------|------------------------------------|---------|--------------------|---------|----------------------------|---------------------|------------|-------------------------------|---------------------------------------------------|--------|--------------|------|
| Brendan Hayes | 2019-10-29 00:00:00.000 | NULL  | Acora Village                      | NULL    | James Kenny        | Call    | First Touch / Introduction | No Contact          | NULL       | Sponsorship                   | NULL                                              | NULL   | NULL         | NULL |
| Brendan Hayes | 2019-10-29 00:00:00.000 | NULL  | Status of Women Canada             | NULL    | Lise Coursey       | Call    | First Touch / Introduction | Other               | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 3             | 2019-10-29 00:00:00.000 | NULL  | BBB Education Foundation Mani      | NULL    | Mary Alaron        | Meeting | Presentation / Pitch       | Contact Made        | NULL       | Subscription (e-Lib / e-Data) | Regional Soundings Tour/Subscription              | NULL   | NULL         | NULL |
| 4             | 2019-10-29 00:00:00.000 | NULL  | Independent                        | NULL    | Chris Tweedie      | Meeting | Other                      | Next Step Scheduled | NULL       | Subscription (e-Lib / e-Data) | NULL                                              | NULL   | NULL         | NULL |
| 5             | 2019-10-30 00:00:00.000 | NULL  | Fergusone                          | NULL    | Joel Prentice      | Call    | Presentation / Pitch       | Contact Made        | NULL       | Sponsorship                   | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 6             | 2019-10-30 00:00:00.000 | NULL  | Nav Canada                         | NULL    | Lyne Wilson        | Call    | Relationship Management    | No Contact          | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 7             | 2019-10-30 00:00:00.000 | NULL  | Nigerian Embassy                   | NULL    | NULL               | Call    | Qualifying                 | Next Step Scheduled | NULL       | Conference                    | Public Sector Leadership                          | NULL   | NULL         | NULL |
| 8             | 2019-10-30 00:00:00.000 | NULL  | St Johns Ambulance                 | NULL    | James Williamson   | Call    | First Touch / Introduction | Contact Made        | NULL       | Other                         | Previously worked with James/find opps            | NULL   | NULL         | NULL |
| 9             | 2019-10-30 00:00:00.000 | NULL  | Ottawa Police Service              | NULL    | Angela Slobodan    | Email   | First Touch / Introduction | Opportunity         | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | 7950         | NULL |
| 10            | 2019-10-30 00:00:00.000 | NULL  | Public Safety Canada               | NULL    | Richard McDonald   | Email   | First Touch / Introduction | No Contact          | NULL       | Niagara                       | NULL                                              | NULL   | NULL         | NULL |
| 11            | 2019-10-30 00:00:00.000 | NULL  | Independent                        | NULL    | Chris Tweedie      | Meeting | Presentation / Pitch       | Contact Made        | NULL       | Subscription (e-Lib / e-Data) | NULL                                              | NULL   | NULL         | NULL |
| 12            | 2019-10-31 00:00:00.000 | NULL  | Nav Canada                         | NULL    | Raymond Bohn       | Meeting | First Touch / Introduction | Contact Made        | NULL       | Conference                    | Sponsor/Mental Health in the Capital              | NULL   | NULL         | NULL |
| 13            | 2019-10-31 00:00:00.000 | NULL  | Accessible Media                   | 3254888 | Brenda Grape       | Call    | First Touch / Introduction | No Contact          | NULL       | Other                         | Enterprise                                        | NULL   | NULL         | NULL |
| 14            | 2019-10-31 00:00:00.000 | NULL  | Air Canada                         | NULL    | Gail Arlegui       | Call    | First Touch / Introduction | Contact Made        | NULL       | Niagara                       | Niagara Institute                                 | NULL   | NULL         | NULL |
| 15            | 2019-10-31 00:00:00.000 | NULL  | Canadian Electricity Association   | NULL    | Channa Ferrera     | Call    | First Touch / Introduction | No Contact          | NULL       | Other                         | LM/                                               | NULL   | NULL         | NULL |
| 16            | 2019-10-31 00:00:00.000 | NULL  | Canadian Electricity Association   | NULL    | Ann Kelly          | Call    | First Touch / Introduction | Contact Made        | NULL       | Other                         | Referred to Channa                                | NULL   | NULL         | NULL |
| 17            | 2019-10-31 00:00:00.000 | NULL  | Ricoh Canada                       | NULL    | Marwa Jazi         | Call    | First Touch / Introduction | No Contact          | NULL       | Other                         | Enterprise                                        | NULL   | NULL         | NULL |
| 18            | 2019-10-31 00:00:00.000 | NULL  | Ricoh Canada                       | NULL    | Amit Sandhu        | Call    | First Touch / Introduction | No Contact          | NULL       | Other                         | Follow-up                                         | NULL   | NULL         | NULL |
| 19            | 2019-10-31 00:00:00.000 | NULL  | BBB Education Foundation Mani      | NULL    | Mary Alaron        | Email   | Relationship Management    | No Contact          | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 20            | 2019-10-31 00:00:00.000 | NULL  | Shoppers Drug Mart                 | NULL    | Mark Rolnick       | Email   | Relationship Management    | Contact Made        | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 21            | 2019-11-01 00:00:00.000 | NULL  | Acora Village                      | NULL    | Dan Greenberg      | Call    | First Touch / Introduction | No Contact          | NULL       | Sponsorship                   | Mental Health in the Capital/ speaking with Dan's | NULL   | NULL         | NULL |
| 22            | 2019-11-01 00:00:00.000 | NULL  | Diabetes Canada                    | NULL    | Irene Caron        | Call    | First Touch / Introduction | No Contact          | NULL       | Niagara                       | LM                                                | NULL   | NULL         | NULL |
| 23            | 2019-11-01 00:00:00.000 | NULL  | Northern Mat and Bridge LLP        | NULL    | Kelley Winter      | Call    | First Touch / Introduction | No Contact          | NULL       | NULL                          | NULL                                              | NULL   | NULL         | NULL |
| 24            | 2019-11-01 00:00:00.000 | NULL  | Ontario Ministry of Citizenship    | NULL    | Patrick Morash     | Call    | First Touch / Introduction | No Contact          | NULL       | Niagara                       | LM                                                | NULL   | NULL         | NULL |
| 25            | 2019-11-01 00:00:00.000 | NULL  | Ontario Ministry of Citizenship    | NULL    | Luc Vincent        | Call    | First Touch / Introduction | No Contact          | NULL       | Niagara                       | LM                                                | NULL   | NULL         | NULL |
| 26            | 2019-11-01 00:00:00.000 | NULL  | Ontario Ministry of Citizenship    | NULL    | Suzanne Skinner    | Call    | First Touch / Introduction | No Contact          | NULL       | Niagara                       | LM                                                | NULL   | NULL         | NULL |
| 27            | 2019-11-01 00:00:00.000 | NULL  | Ontario Ministry of Education      | NULL    | Nadine Ramdial     | Call    | First Touch / Introduction | No Contact          | NULL       | Niagara                       | LM                                                | NULL   | NULL         | NULL |
| 28            | 2019-11-01 00:00:00.000 | NULL  | RCMP                               | NULL    | Heather Cartt      | Call    | First Touch / Introduction | No Contact          | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | 3975         | NULL |
| 29            | 2019-11-01 00:00:00.000 | NULL  | RCMP                               | NULL    | Bruce Christianson | Call    | First Touch / Introduction | No Contact          | NULL       | Conference                    | LM/ Mental Health in the Capital                  | NULL   | NULL         | NULL |
| 30            | 2019-11-01 00:00:00.000 | NULL  | RCMP                               | NULL    | Dana Overton       | Call    | First Touch / Introduction | No Contact          | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 31            | 2019-11-01 00:00:00.000 | NULL  | RCMP                               | NULL    | Sarah Wright       | Call    | First Touch / Introduction | No Contact          | NULL       | Conference                    | Mental Health in the Capital                      | NULL   | NULL         | NULL |
| 32            | 2019-11-01 00:00:00.000 | NULL  | Regional Municipality of Waterf... | NULL    | Stephen Van Val... | Call    | First Touch / Introduction | No Contact          | NULL       | Niagara                       | LM                                                | NULL   | NULL         | NULL |
| 33            | 2019-11-01 00:00:00.000 | NULL  | Workforce Development              | NULL    | Wade Mathews       | Call    | First Touch / Introduction | No Contact          | NULL       | Other                         | Future Skill Niagara                              | NULL   | NULL         | NULL |
| 34            | 2019-11-01 00:00:00.000 | NULL  | Workforce Development              | NULL    | Wade Mathews       | Call    | First Touch / Introduction | No Contact          | NULL       | Other                         | Future Skill Niagara                              | NULL   | NULL         | NULL |
| 35            | 2019-11-01 00:00:00.000 | NULL  | RCMP                               | NULL    | Heather Cartt      | Meeting | Qualifying                 | Opportunity         | NULL       | Conference                    | Spoke with Heather she would like info on Men...  | NULL   | 4475         | NULL |

## Stage Three: Power BI Dashboard as a new Sales Tracker & KPI Tool

| Sales_Rep            | Interaction Date | Org ID | Organization                  | Cust ID | Customer Name  | Tactic  | Purpose                    | Outcome             | Date of Sale | Product Group                 |
|----------------------|------------------|--------|-------------------------------|---------|----------------|---------|----------------------------|---------------------|--------------|-------------------------------|
| Tracie Jones         | 1/1/2020         | NULL   | Acora Village                 | NULL    | James Kenny    | Call    | First Touch / Introduction | No Contact          | NULL         | Sponsorship                   |
| Brendan Hayes        | 1/1/2020         | NULL   | Status of Women Canada        | NULL    | Lise Coursey   | Call    | First Touch / Introduction | Other               | NULL         | Conference                    |
| Catherine Labossiere | 1/1/2020         | NULL   | BBB Education Foundation Mani | NULL    | Mary Alaron    | Meeting | Presentation / Pitch       | Contact Made        | NULL         | Subscription (e-Lib / e-Data) |
| Darrell Wiggins      | 1/1/2020         | NULL   | Independent                   | NULL    | Chris Tweedie  | Meeting | Other                      | Next Step Scheduled | NULL         | Subscription (e-Lib / e-Data) |
| Kitty Bentley        | 1/1/2020         | NULL   | Nav Canada                    | NULL    | Joel Prentice  | Call    | Presentation / Pitch       | Contact Made        | NULL         | Sponsorship                   |
| Virginia Campagna    | 1/1/2020         | NULL   | Relationship Management       | NULL    | Lyne Wilson    | Call    | Relationship Management    | No Contact          | NULL         | Conference                    |
| Brendan Hayes        | 1/1/2020         | NULL   | Public Safety Canada          | NULL    | Raymond Bohn   | Meeting | First Touch / Introduction | Contact Made        | NULL         | Conference                    |
| Catherine Labossiere | 1/1/2020         | NULL   | Independent                   | NULL    | Brenda Grape   | Call    | First Touch / Introduction | No Contact          | NULL         | Other                         |
| Darrell Wiggins      | 1/1/2020         | NULL   | Nav Canada                    | NULL    | Gail Arlegui   | Call    | First Touch / Introduction | Contact Made        | NULL         | Niagara                       |
| Kitty Bentley        | 1/1/2020         | NULL   | Relationship Management       | NULL    | Channa Ferrera | Call    | First Touch / Introduction | No Contact          | NULL         | Other                         |
| Tracie Jones         | 1/1/2020         | NULL   | Public Safety Canada          | NULL    | Ann Kelly      | Call    | First Touch / Introduction | Contact Made        | NULL         | Referred to Channa            |
| Virginia Campagna    | 1/1/2020         | NULL   | Independent                   | NULL    | Marwa Jazi     | Call    | First Touch / Introduction | No Contact          | NULL         | Enterprise                    |
| Brendan Hayes        | 1/1/2020         | NULL   | Nav Canada                    | NULL    | Amit Sandhu    | Call    | First Touch / Introduction | No Contact          | NULL         | Follow-up                     |
| Catherine Labossiere | 1/1/2020         | NULL   | Relationship Management       | NULL    | Mary Alaron    | Email   | Relationship Management    | No Contact          | NULL         | Conference                    |
| Darrell Wiggins      | 1/1/2020         | NULL   | Public Safety Canada          | NULL    | Mark Rolnick   | Email   | Relationship Management    | Contact Made        | NULL         | Conference                    |
| Kitty Bentley        | 1/1/2020         | NULL   | Independent                   | NULL    | Dan Greenberg  | Call    | First                      |                     |              |                               |

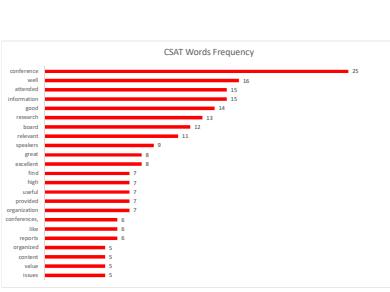
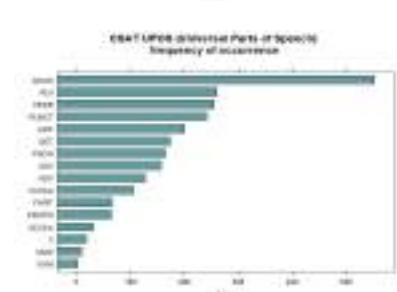
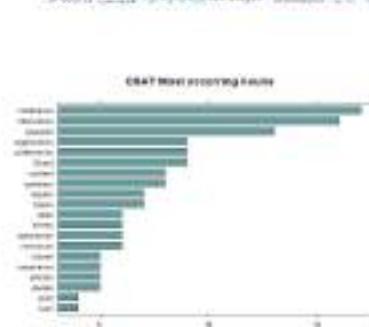
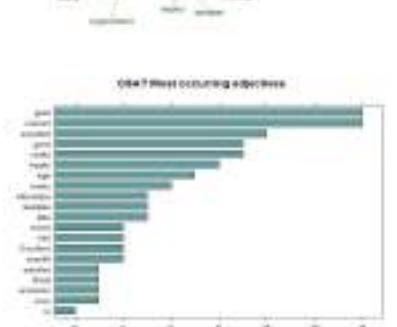
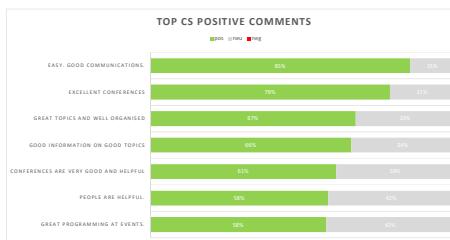
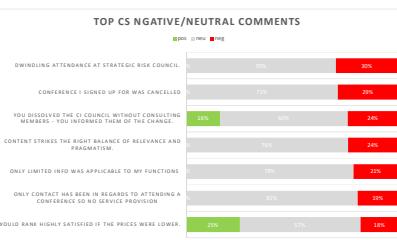
# **Customer's Feedback Review & Sentiment Analysis**

| Case | CSAT: Comments                                                            | PAGE  | PAGE  |
|------|---------------------------------------------------------------------------|-------|-------|
| 168  | Dwindling attendance at Strategic Risk Council                            | 0.296 | 0.704 |
| 334  | conference I signed up for was canceled                                   | 0.286 | 0.714 |
| 1322 | Content was relevant to my organization, members, v                       | 0.286 | 0.714 |
| 2024 | Content strikes the right balance of relevance and pragmatism             | 0.288 | 0.762 |
| 3842 | Only limited info was applicable to my functions                          | 0.213 | 0.787 |
| 4085 | content/conference has been in regards to attending a conference's        | 0.179 | 0.869 |
| 3711 | Workshop was well organized and informative                               | 0.179 | 0.869 |
| 1874 | I have had limited experience in the last year so seemed apposite         | 0.116 | 0.864 |
| 2519 | We encountered no issues in retrieving the data as the proc               | 0.136 | 0.864 |
| 568  | Information was presented in a clear and concise manner                   | 0.136 | 0.864 |
| 935  | They appeared to be more staffed short of time and resources              | 0.128 | 0.822 |
| 2760 | Attended a Workshop 12 months ago; very well done, but not as             | 0.123 | 0.672 |
| 2096 | prior attendances have not continued                                      | 0.123 | 0.672 |
| 99   | Information and structural changes have decreased                         | 0.115 | 0.747 |
| 1801 | I haven't had the opportunity to due demands to parts                     | 0.115 | 0.888 |
| 821  | Disorganized information was biased and frequently irrelevant             | 0.115 | 0.882 |
| 2118 | Information was presented in a clear and concise manner                   | 0.115 | 0.882 |
| 2812 | Billing Department does not keep good records speakers etc                | 0.103 | 0.887 |
| 3148 | I made the focus on the food industry that was my main draw               | 0.103 | 0.887 |
| 3984 | Information was presented in a clear and concise manner                   | 0.094 | 0.887 |
| 38   | Reliable information                                                      | 0.094 | 0.722 |
| 48   | We only access the reports. We trust the information and are              | 0.094 | 0.726 |
| 50   | Very good value for reports, but would like to see more relevant          | 0.094 | 0.726 |
| 53   | Great presentation                                                        | 0.094 | 0.726 |
| 73   | Consultation de données et études sur le web seulement.                   | 0.081 | 0.442 |
| 106  | pour la qualité des produits malais les retards de livraison              | 0.081 | 0.442 |
| 108  | Assurance que les produits sont dans les délais                           | 0.081 | 0.442 |
| 143  | The sales employees were helpful in setting up an account at              | 0.083 | 0.163 |
| 167  | attended an Executive Council meeting, and was satisfied w                | 0.082 | 0.177 |
| 1348 | Les présentations sont toujours extrêmement bien organisées, <sup>1</sup> | 0.082 | 0.177 |
| 175  | well organized and informative                                            | 0.056 | 0.344 |
| 182  | Heather Day and Richard Brisebois are excellent. Beyond beyond            | 0.056 | 0.344 |
| 230  | talent level in econ has been deteriorating and it shows in t             | 0.056 | 0.344 |
| 233  | This is a great resource for our industry                                 | 0.056 | 0.344 |
| 247  | The Board provided valuable assistance with a member surv                 | 0.069 | 0.307 |
| 284  | Information provided in the Conference Board's 2020 Compu                 | 0.077 | 0.273 |
| 387  | It's rare that I encounter documentation that is not useful or            | 0.077 | 0.273 |
| 320  | valuable. The information provided in the Conference Board's Cbdc         | 0.074 | 0.474 |
| 324  | appreciate receiving notifications of recent research and of              | 0.074 | 0.213 |
| 352  | generally the material made available is useful and relevant              | 0.074 | 0.264 |
| 355  | timely and relevant                                                       | 0.074 | 0.264 |
| 361  | Primarily because provides reliable assessments of provincial             | 0.070 | 0.298 |
| 401  | content is relevant and informative, not too high level and in            | 0.080 | 0.199 |
| 411  | Global perspective                                                        | 0.080 | 0.199 |
| 424  | Has a Canadian perspective. Also has French resources                     | 0.070 | 0.298 |
| 432  | Worked on a research project with the Cbdc, which was very                | 0.075 | 0.259 |
| 505  | Terrific resources and research through the Cbdc                          | 0.069 | 0.349 |
| 550  | My understanding is that the Cbdc is the best place to find the resp      | 0.073 | 0.273 |
| 565  | attended the June event in Kelowna and thought that it had                | 0.056 | 0.402 |
| 577  | Timely and accurate information on topics of interest to me i             | 0.082 | 0.188 |
| 642  | Received notifications of recent research and of general                  | 0.074 | 0.213 |
| 645  | Overall, it has been good. I do think some of the pricing c               | 0.074 | 0.084 |
| 777  | People are helpful                                                        | 0.047 | 0.583 |
| 799  | During the pandemic event was high                                        | 0.070 | 0.298 |
| 854  | Le service à la communauté est efficace des diverses                      | 0.083 | 0.163 |
| 974  | By attending a Security event, provided me with good info,                | 0.073 | 0.298 |
| 988  | The Conference Board provides great insightful, relevant and I            | 0.073 | 0.298 |
| 1088 | the information is presented in a clear and concise manner. The Co        | 0.073 | 0.298 |
| 1122 | Products consults annualamente répondre au besoin                         | 0.1   | 0     |
| 1129 | I believe the Cbdc could do more to advance safety in Canada              | 0.079 | 0.216 |
| 1130 | Participated in a webinar and found it fine.                              | 0.073 | 0.298 |
| 1134 | Fall economic update was well done. Highly detailed.                      | 0.077 | 0.213 |
| 1224 | have found value in the conference.                                       | 0.069 | 0.324 |
| 1599 | Conferences are very good, helpful                                        | 0.039 | 0.652 |
| 1782 | Information was timely and useful                                         | 0.070 | 0.298 |
| 1320 | Information is timely and useful                                          | 0.056 | 0.424 |
| 1381 | Receiving notifications targeted to my needs and in                       | 0.088 | 0.2   |
| 1389 | research, analysis, research and analytical reports relevant              | 0.088 | 0.2   |
| 1460 | Very useful economic and labour market outcomes                           | 0.053 | 0.347 |
| 1477 | Reports are extremely relevant                                            | 0.056 | 0.5   |
| 1573 | Very professional, highly quality, and impactful sessions                 | 0.088 | 0.118 |
| 1655 | Reports aren't timely. In last report the appendices were not             | 0.088 | 0.114 |
| 1677 | Other than readability, nothing else. Much more use of Cbdc               | 0.1   | 0     |
| 1774 | Information was timely and well done, but kind briefer.                   | 0.088 | 0.114 |
| 1833 | We are a library and this work really helps, but we have been i           | 0.094 | 0.066 |
| 1839 | very informative, timely, and to the point                                | 0.076 | 0.212 |
| 1940 | Information and analysis of international best practices/research         | 0.078 | 0.212 |
| 1851 | The conference provides education on the location of your                 | 0.087 | 0.318 |
| 1857 | I have not fully utilized the resources, but have watched a few           | 0.1   | 0     |
| 1862 | Excellent conference in May 2019, everything presented cool               | 0.085 | 0.183 |
| 1887 | Information was timely and useful                                         | 0.085 | 0.183 |
| 1897 | Can't attend as many conferences/webinars as I would like, e              | 0.085 | 0.183 |
| 1900 | Many details along with the Conference Board have been access             | 0.085 | 0.183 |
| 2009 | Very useful information and analysis, timely and relevant                 | 0.088 | 0.118 |
| 2019 | Very relevant to my field and program, excellent knowled                  | 0.076 | 0.236 |
| 2170 | Cbdc completed a project for my organization that was well                | 0.087 | 0.143 |
| 2176 | Utilize Conference Board events as networking opportu                     | 0.083 | 0.167 |
| 2276 | Information was timely and useful                                         | 0.088 | 0.118 |
| 2375 | The Safety Spaces Webinar was wonderful, excellent, actions               | 0.042 | 0.574 |
| 2482 | Excellent resource of information                                         | 0.044 | 0.552 |
| 2576 | I find the information that you produce to be extremely usef              | 0.083 | 0.193 |
| 2585 | I have only recently occupied this position and have not                  | 0.089 | 0.119 |
| 2615 | Very happy with the work we did on the Mid Size Cities re                 | 0.079 | 0.344 |
| 2620 | Information was timely and useful                                         | 0.088 | 0.118 |
| 2673 | Very well organised group. Makes it easy to participate                   | 0.059 | 0.413 |
| 2680 | La formation à laquelle j'ai assisté était adéquate.                      | 0.076 | 0.322 |
| 2773 | Information was timely and useful                                         | 0.088 | 0.118 |
| 2818 | attended the Workplace Well Being conference in Whistler;                 | 0.058 | 0.342 |
| 2866 | Don't use info from the best programs, speakers, research, e              | 0.042 | 0.574 |
| 2944 | Excellent info on the best programs, speakers, research, e                | 0.044 | 0.552 |
| 2946 | Wide range and research/information made available is of goo              | 0.088 | 0.118 |
| 2995 | if you do a cultafolage dans le payment et CB c'est plus que j            | 0.09  | 0.1   |
| 3005 | smooth run event, good content                                            | 0.058 | 0.422 |
| 3179 | Information was timely and useful                                         | 0.088 | 0.118 |
| 3290 | Quality research articles. Will attend an upcoming conferen               | 0.083 | 0.167 |
| 3298 | Informative Meetings and Conferences                                      | 0.088 | 0.199 |
| 3323 | Information was timely and really good, I had a lot of the                | 0.089 | 0.119 |
| 3367 | Excellent conferences                                                     | 0.023 | 0.763 |
| 3408 | I like hearing about the training they offer but have not been            | 0.088 | 0.114 |
| 3415 | Have attended events - well organized, great speakers - relev             | 0.069 | 0.343 |
| 3428 | Information was timely and useful                                         | 0.088 | 0.118 |
| 3475 | Content on the website and support from staff have been h                 | 0.021 | 0.779 |
| 3550 | Training was enjoyable and well organized                                 | 0.044 | 0.556 |
| 3555 | Information was timely and useful                                         | 0.088 | 0.118 |
| 3649 | attended a really well run workshop on future foresight                   | 0.075 | 0.213 |
| 3674 | attended the Induction Conference. The content was exten                  | 0.088 | 0.175 |
| 3677 | Attended one webinar, it was helpful                                      | 0.076 | 0.322 |
| 3772 | Information was timely and useful                                         | 0.048 | 0.574 |
| 3833 | Membership too expensive for resources provided, follow us                | 0.088 | 0.2   |
| 3847 | New to the organization, and highly satisfied.                            | 0.066 | 0.346 |
| 3907 | Information was timely and useful                                         | 0.088 | 0.118 |
| 3957 | I need the content from the Cbdc, very good but the price o               | 0.079 | 0.273 |
| 3970 | le contenu des séminaires du Conference Board est très                    | 0.068 | 0.359 |
| 4000 | I attended a research in the field and have referred to it in my          | 0.088 | 0.178 |
| 4039 | My first experience was a recent one and will refer to it in the          | 0.076 | 0.322 |
| 4093 | My attending the conference next week will be my first exp                | 0.1   | 0     |
| 4108 | I only contacted them to register for a conference and the o              | 0.085 | 0.199 |
| 4113 | attendees were very helpful. Could be better if the                       | 0.076 | 0.322 |
| 4114 | only received emails, going to event this spring                          | 0.1   | 0     |

| Top Negative | Ca CSAT            | Comments | pos   | new   | neg  |
|--------------|--------------------|----------|-------|-------|------|
| 3571         | I would rank High  |          | 0.252 | 0.569 | 0.17 |
| 4086         | Only contact has   |          | 0     | 0.807 | 0.19 |
| 3842         | Only limited info  |          | 0     | 0.787 | 0.23 |
| 2024         | Content strikes th |          | 0     | 0.762 | 0.23 |
| 1522         | You dissolved the  |          | 0.158 | 0.602 | 0.21 |
| 3334         | conference i sign  |          | 0     | 0.714 | 0.28 |
| 168          | Dwindling attend   |          | 0     | 0.704 | 0.29 |

| Top Positive Case | CSAT Comments         | dos |
|-------------------|-----------------------|-----|
| 53                | Great programming!    |     |
| 877               | People are helpful.   |     |
| 1259              | Conferences are very  |     |
| 411               | Good information on   |     |
| 2771              | Great topics and well |     |
| 3367              | Excellent conferences |     |
| 2500              | Easy. Good commun     |     |

| Average of neu | Average of neu | Average of os |
|----------------|----------------|---------------|
| 2%             | 73%            |               |



## Person Lead Score

### Data Briefing & Methodology

- 1 DB dataset of 161K records of customers activities counted in the past 6 years based on customer ID and classified into three categories: 0-2 years, 2-4 years, before 4 years.
- 1 DB dataset of 162K records of customers' downloads in the past 6 years based on customer ID and classified into Monthly downloads.
- 1 DB dataset of 280K records of customers in the past 6 years total generated revenue and total transactions based on ID.
- 1 Market dataset of 190K records of customers in the past 1 year with including the Person\_score along with other features ('CISID', 'Last\_Name', 'Job\_Title', 'Person\_Status', 'Function\_Code', 'Expertise', 'caslconsenttype', 'Lifecycle\_stage', 'City', 'Rank', 'Demographic\_Score', 'Behavioral\_Score', 'canemail', 'Has\_Downloaded', 'EmailOpened', 'EmailClicked', 'Revenue', 'Transactions', 'Activity2\_4Y', 'ActivityInLast2Y', 'ActivityOver4Y', 'Company\_Employees', 'Status').
- 1 Final dataset as the study/sample set of 28K that has most of the features available.
- A regression analysis over the key features associate with the Person Lead Score (PLS) of current customer database.

### Findings Summary: ( $R^2 = .56$ )

- The Person Lead Score (PLS) associates **positively** with the Demographic and Behavioral Scores and becomes more intense with the intensity increase of both features. However, the behavioral scores have bigger impact on the PLS than the demographic scores.
- The PLS associates **positively** with the Ranks, but with more intensity to the “4-Manager” and “5-Technical” ranks over others. In other words, being a manager or a technical will give the customer drives higher PLS score more than other ranks.
- PLS associates positively with the individual revenues with high impact of +10K revenue category on the PLS than other categories.

- Transactions have associated differently with PLS. Individuals with below 10 transactions affects **negatively** the PLS, while 11-50 transactions affect slightly **positively** the PLS. Meanwhile, People with more than 50 transactions would drive high positive impact on PLS.
- Regarding number of activities over the past 6 years (cat: 0-2, 2-4, +4), all individuals who did not do any activities during the last 2 years and did have some activities formerly would have lower PLS. One exception is people who have done 10+ activities 2-4 years ago would have a **positive impact** on their PLS.
- The PLS of all individuals who had below 10- activities in the last two years would be affected **negatively**, while having 10+ activities associates **positively** with the PLS.
- The PLS score is affected **positively** with individuals who are affiliated with companies who have more than 1000 employees, and negatively with companies that have less 1000.
- LCS associates differently based on category: it correlates **positively** on the PLS while being retained/acquired; and negatively with else.
- Canemail, and consent type also match our expectations in which cannot-email and no consent have **negative** impact on PLS while else have **positive** impact.

### **Findings Summary: ( $R^2 = .93$ )**

- More details about the products & orders effect.
- Transaction Types: Pay\_Trans, Dist\_Trans, AR\_Trans, TR\_Trans have **positive** impact on PLS, while PP\_Trans has **negative** one.
- Order Types: PUBIN, MEETINGS, and EDATAINTV have positive impact on PLS, while GENERAL, CM, FINRES, SUBSCRIPT, NCOFE, SPONSOR, ONLINE have negative impact on PLS.

- **Positive Download Contents: Conference Notes, Assessment Tools, Books, Brochures, Case studies, Executive Summaries, Infographics, Issue statements, Key findings, presentations, submissions, webinars, and download amounts have positive impact on PLS.**
- Negative Download Contents: Articles, Booklets, Chapters, director notes, industry profile, video interviews ...etc.

| Column1           | CISID | Person Score | Rank  | Demographic Score | Behavioral Score | canemail | Has Downloaded | Email Opened | Email Clicked | Revenue | Trans | Activity2_4Y | ActivityInLast2Y | ActivityOver4Y | Company Employees |
|-------------------|-------|--------------|-------|-------------------|------------------|----------|----------------|--------------|---------------|---------|-------|--------------|------------------|----------------|-------------------|
| CISID             | 1.00  | -0.02        | 0.19  | -0.10             | -0.01            | 0.19     | -0.55          | 0.22         | 0.22          | -0.03   | -0.21 | -0.02        | 0.00             | -0.14          | -0.01             |
| Person Score      | -0.02 | 1.00         | -0.01 | 0.25              | 0.94             | 0.12     | 0.01           | 0.08         | 0.08          | 0.01    | 0.06  | 0.49         | 0.64             | 0.36           | 0.01              |
| Rank              | 0.19  | -0.01        | 1.00  | -0.18             | 0.02             | 0.01     | -0.12          | 0.01         | 0.01          | -0.02   | -0.09 | 0.03         | 0.03             | 0.01           | 0.02              |
| Demographic Score | -0.10 | 0.25         | -0.18 | 1.00              | 0.01             | 0.04     | 0.05           | 0.02         | 0.02          | 0.02    | 0.06  | 0.01         | 0.01             | 0.02           | 0.04              |
| Behavioral Score  | -0.01 | 0.94         | 0.02  | 0.01              | 1.00             | 0.01     | 0.01           | -0.01        | -0.01         | 0.01    | 0.04  | 0.51         | 0.65             | 0.37           | 0.00              |
| canemail          | 0.19  | 0.12         | 0.01  | 0.04              | 0.01             | 1.00     | -0.08          | 0.56         | 0.56          | 0.02    | 0.06  | 0.08         | 0.15             | 0.02           | -0.03             |
| Has Downloaded    | 0.55  | 0.01         | -0.12 | 0.05              | 0.01             | 0.08     | -              | 1.00         | -0.11         | -0.11   | 0.02  | 0.15         | 0.03             | 0.02           | 0.09              |
| EmailOpened       | 0.22  | 0.08         | 0.01  | 0.02              | -0.01            | 0.56     | -0.11          | 1.00         | 1.00          | 0.00    | 0.03  | 0.07         | 0.12             | 0.02           | -0.04             |
| EmailClicked      | 0.22  | 0.08         | 0.01  | 0.02              | -0.01            | 0.56     | -0.11          | 1.00         | 1.00          | 0.00    | 0.03  | 0.07         | 0.12             | 0.02           | -0.04             |
| Revenue           | 0.03  | 0.01         | -0.02 | 0.02              | 0.01             | 0.02     | 0.02           | 0.00         | 0.00          | 1.00    | 0.25  | 0.02         | 0.01             | 0.03           | 0.00              |
| Transactions      | 0.21  | 0.06         | -0.09 | 0.06              | 0.04             | 0.06     | 0.15           | 0.03         | 0.03          | 0.25    | 1.00  | 0.12         | 0.12             | 0.19           | -0.01             |
| Activity2_4Y      | 0.02  | 0.49         | 0.03  | 0.01              | 0.51             | 0.08     | 0.03           | 0.07         | 0.07          | 0.02    | 0.12  | 1.00         | 0.83             | 0.79           | 0.00              |
| ActivityInLast2Y  | 0.00  | 0.64         | 0.03  | 0.01              | 0.65             | 0.15     | 0.02           | 0.12         | 0.12          | 0.01    | 0.12  | 0.83         | 1.00             | 0.68           | -0.01             |
| ActivityOver4Y    | -0.14 | 0.36         | 0.01  | 0.02              | 0.37             | 0.02     | 0.09           | 0.02         | 0.02          | 0.03    | 0.19  | 0.79         | 0.68             | 1.00           | 0.00              |
| Company Employees | -0.01 | 0.01         | 0.02  | 0.04              | 0.00             | 0.03     | 0.00           | -0.04        | -0.04         | 0.00    | -0.01 | 0.00         | -0.01            | 0.00           | 1.00              |

| Variable                | Person_Score |
|-------------------------|--------------|
| Person_Score            | 1.00         |
| CISID                   | -0.03        |
| Rank                    | -0.01        |
| Demographic_Score       | 0.31         |
| Behavioral_Score        | 0.91         |
| canemail                | 0.11         |
| Person_Status_Coded     | 0.14         |
| Person_Score_Labeled    | 0.54         |
| Behavioral_Score_Coded  | 0.51         |
| Demographic_Score_Coded | 0.28         |
| Lifecycle_stage_Coded   | -0.13        |
| caslconsenttype_Coded   | -0.10        |
| canemail_Coded          | 0.11         |
| TRANSACTION_COUNT       | 0.06         |
| PAY_TRANSTYPE           | 0.06         |
| DIST_TRANSTYPE          | 0.05         |
| AR_TRANSTYPE            | 0.06         |
| PP_TRANSTYPE            | 0.00         |
| TR_TRANSTYPE            | 0.00         |
| AR_SOURCESYS            | 0.05         |
| DUES_SOURCESYS          | 0.01         |
| MEETING_SOURCESYS       | 0.02         |
| ORDER_SOURCESYS         | 0.05         |
| AMOUNT                  | 0.02         |

| Variable                | Person_Score |
|-------------------------|--------------|
| Person_Score            | 1            |
| CISID                   | -0.032383298 |
| Rank                    | 0.008518771  |
| Demographic_Score       | 0.175762005  |
| Behavioral_Score        | 0.97141317   |
| canemail                | 0.096122244  |
| Person_Status_Coded     | 0.093769279  |
| Person_Score_Labeled    | 0.44786887   |
| Behavioral_Score_Coded  | 0.500656747  |
| Demographic_Score_Coded | 0.166327502  |
| Lifecycle_stage_Coded   | -0.151443868 |
| caslconsenttype_Coded   | -0.082970085 |
| canemail_Coded          | 0.096122244  |
| Downloads_COUNT         | 0.541415113  |
| Conference_KeyNotes     | 0.195282232  |
| Articles                | -0.00186856  |
| AssessmentTool          | 0.030286882  |
| Book                    | 0.25521484   |
| Booklet                 | 0.083715235  |
| Briefing                | 0.478825808  |
| Brochure                | 0.13230223   |
| Case_Study              | 0.27677074   |
| Conference_Presentation | 0.379169661  |
| Conference_Proceedings  | 0.201604971  |

|                        |             |
|------------------------|-------------|
| Conference_Keynotes    | 0.387823772 |
| Conference_Recordings  | 0.358426119 |
| Council_Perspectives   | 0.199400289 |
| Detailed_Findings      | 0.372151783 |
| Director_Notes         | 0.328278941 |
| Discussion_Paper       | 0.080784056 |
| eLibrary_Document      | 0.129853141 |
| Economics_Watch_Report | 0.143023906 |
| Executive_Summary      | 0.430449217 |
| Industry_Profile       | 0.242812944 |
| Infographic            | 0.097102231 |
| Issue_Statement        | 0.095337527 |
| Key_Findings           | 0.082635154 |
| Live_Webinar           | 0.215533493 |
| Presentation           | 0.179641287 |
| Report                 | 0.535760413 |
| Submission             | 0.117467144 |
| Synopsis               | 0.088208526 |
| Video_Interview        | 0.026246193 |
| web                    | 0.15778009  |
| Webinaire              | 8.38E-05    |
| Web_Briefing           | 0.079237002 |
| Webinar                | 0.23517262  |
| Website                | 0.35837161  |
| Download_AMOUNT        | 0.526295361 |

## OLS Regression Results

| Dep. Variable:                                     | Person_Score     | R-squared:          | 0.560          |         |       |           |          |
|----------------------------------------------------|------------------|---------------------|----------------|---------|-------|-----------|----------|
| Model:                                             | OLS              | Adj. R-squared:     | 0.559          |         |       |           |          |
| Method:                                            | Least Squares    | F-statistic:        | 1391.          |         |       |           |          |
| Date:                                              | Tue, 08 Oct 2019 | Prob (F-statistic): | 0.00           |         |       |           |          |
| Time:                                              | 09:17:53         | Log-Likelihood:     | -1.3588e+05    |         |       |           |          |
| No. Observations:                                  | 28507            | AIC:                | 2.782e+05      |         |       |           |          |
| Df Residuals:                                      | 28488            | BIC:                | 2.784e+05      |         |       |           |          |
| Df Model:                                          | 26               |                     |                |         |       |           |          |
| Covariance Type:                                   | nonrobust        |                     |                |         |       |           |          |
|                                                    |                  | coef                | std err        | t       | P> t  | [0.025    | 0.975]   |
| Intercept                                          |                  | -6.5595             | 2.224          | -2.949  | 0.003 | -10.920   | -2.199   |
| Rank_Coded[T.1-CEO]                                |                  | 1.3468              | 1.931          | 0.697   | 0.486 | -2.439    | 5.132    |
| Rank_Coded[T.2-VP]                                 |                  | 2.2328              | 1.844          | 1.210   | 0.226 | -1.383    | 5.847    |
| Rank_Coded[T.3-Director]                           |                  | 3.8446              | 1.817          | 2.116   | 0.034 | 0.283     | 7.407    |
| Rank_Coded[T.4-Manager]                            |                  | 5.2493              | 1.819          | 2.885   | 0.004 | 1.684     | 8.815    |
| Rank_Coded[T.5-Technical]                          |                  | 3.8725              | 1.827          | 2.120   | 0.034 | 0.291     | 7.454    |
| Rank_Coded[T.6-Admin]                              |                  | 2.9226              | 1.801          | 1.553   | 0.120 | -0.765    | 6.610    |
| Rank_Coded[T.7-Student]                            |                  | 0.7600              | 4.308          | 0.176   | 0.860 | -7.683    | 9.283    |
| Behavioral_Score_Coded[T.Mid: 11-38]               |                  | 8.7115              | 8.590          | 14.757  | 0.000 | 7.554     | 9.869    |
| Behavioral_Score_Coded[T.Relatively High 31-100]   |                  | 63.8857             | 1.122          | 56.886  | 0.000 | 61.687    | 66.084   |
| Behavioral_Score_Coded[T.Exceptionally High > 100] |                  | 232.4852            | 1.406          | 165.326 | 0.000 | 229.650   | 235.161  |
| Revenue_Coded[T.Mid: 501-2K]                       |                  | 8.1923              | 8.424          | 0.454   | 0.658 | -0.638    | 1.023    |
| Revenue_Coded[T.Mid_High 2K-10K]                   |                  | 8.6348              | 8.582          | 1.202   | 0.287 | -0.351    | 1.619    |
| Revenue_Coded[T.High 10K+]                         |                  | 1.2438              | 8.697          | 1.784   | 0.075 | -0.123    | 2.611    |
| Transactions_Coded[T.Mid: 6-10]                    |                  | -8.1289             | 8.444          | -0.290  | 0.772 | -0.999    | 0.741    |
| Transactions_Coded[T.Mid_High: 11-50]              |                  | 8.1233              | 8.548          | 0.225   | 0.822 | -0.951    | 1.197    |
| Transactions_Coded[T.High: 50+]                    |                  | 5.2897              | 1.270          | 4.165   | 0.000 | 2.886     | 7.779    |
| Activity2_4Y_Coded2[T.Active]                      |                  | 0.5692              | 0.442          | 1.287   | 0.198 | -0.297    | 1.436    |
| ActivityInLast2Y_Coded2[T.Active]                  |                  | 1.4653              | 8.675          | 2.171   | 0.038 | 0.143     | 2.788    |
| ActivityOver4Y_Coded2[T.Active]                    |                  | -1.8945             | 8.379          | -2.890  | 0.004 | -1.837    | -0.352   |
| Demographic_Score_Coded                            |                  | 13.7736             | 0.243          | 56.756  | 0.000 | 13.298    | 14.249   |
| Lifecycle_stage_Coded                              |                  | 8.2848              | 8.386          | 0.670   | 0.503 | -0.394    | 0.884    |
| caslconsenttype_Coded                              |                  | 8.6998              | 8.284          | 2.466   | 0.014 | 0.144     | 1.256    |
| canemail_Coded                                     |                  | 8.6350              | 8.826          | 0.769   | 0.442 | -0.984    | 2.254    |
| Has_Downloaded_Coded                               |                  | 1.0878              | 8.619          | 1.757   | 0.079 | -0.126    | 2.381    |
| EmailClicked_Coded                                 |                  | -8.2210             | 8.458          | -0.483  | 0.629 | -1.118    | 0.676    |
| Company_Employees                                  |                  | 1.267e-06           | 3.61e-06       | 0.351   | 0.726 | -5.81e-06 | 8.34e-06 |
| Omnibus:                                           | 72630.217        | Durbin-Watson:      | 1.986          |         |       |           |          |
| Prob(Omnibus):                                     | 8.800            | Jarque-Bera (JB):   | 2322948441.192 |         |       |           |          |
| Skew:                                              | 28.476           | Prob(JB):           | 0.00           |         |       |           |          |
| Kurtosis:                                          | 1400.299         | Cond. No.           | 1.55e+00       |         |       |           |          |

## Warnings:

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The condition number is large, 1.55e+00. This might indicate that there are strong multicollinearity or other numerical problems.

| Dep. Variable:                                     | Person_Score     | R-squared:          | 0.564          |         |       |         |
|----------------------------------------------------|------------------|---------------------|----------------|---------|-------|---------|
| Model:                                             | OLS              | Adj. R-squared:     | 0.563          |         |       |         |
| Method:                                            | Least Squares    | F-statistic:        | 943.2          |         |       |         |
| Date:                                              | Tue, 08 Oct 2019 | Prob (F-statistic): | 0.00           |         |       |         |
| Time:                                              | 09:25:10         | Log-Likelihood:     | -1.3495e+05    |         |       |         |
| No. Observations:                                  | 28587            | AIC:                | 2.760e+05      |         |       |         |
| Df Residuals:                                      | 28467            | BIC:                | 2.763e+05      |         |       |         |
| Df Model:                                          | 39               |                     |                |         |       |         |
| Covariance Type:                                   | nonrobust        |                     |                |         |       |         |
|                                                    |                  | coef                | std err        | t       | P> t  | [0.025  |
|                                                    |                  |                     |                |         |       | 0.975]  |
| Intercept                                          |                  | -6.3866             | 2.275          | -2.887  | 0.885 | -19.846 |
| Rank_Coded[T.1-CEO]                                |                  | 1.3142              | 1.925          | 0.683   | 0.495 | -2.458  |
| Rank_Coded[T.2-VP]                                 |                  | 2.1978              | 1.837          | 1.196   | 0.232 | -1.403  |
| Rank_Coded[T.3-Director]                           |                  | 3.6984              | 1.810          | 2.044   | 0.041 | 0.151   |
| Rank_Coded[T.4-Manager]                            |                  | 4.9487              | 1.813          | 2.738   | 0.006 | 1.396   |
| Rank_Coded[T.5-Technical]                          |                  | 3.4499              | 1.821          | 1.894   | 0.858 | -0.120  |
| Rank_Coded[T.6-Admin]                              |                  | 2.7914              | 1.874          | 1.489   | 0.136 | -0.882  |
| Rank_Coded[T.7-Student]                            |                  | 0.3381              | 4.298          | 0.879   | 0.937 | -8.071  |
| Behavioral_Score_Coded[T.Mid: 11-30]               |                  | 9.0720              | 0.589          | 15.403  | 0.000 | 7.918   |
| Behavioral_Score_Coded[T.Relatively High 31-100]   |                  | 61.9003             | 1.128          | 54.930  | 0.000 | 59.769  |
| Behavioral_Score_Coded[T.Exceptionally High > 100] |                  | 227.1999            | 1.459          | 155.761 | 0.000 | 224.341 |
| Revenue_Coded[T.Mid: 501-2K]                       |                  | 0.1987              | 0.423          | 0.478   | 0.638 | -0.638  |
| Revenue_Coded[T.High 2K-10K]                       |                  | 0.6859              | 0.501          | 1.378   | 0.171 | -0.295  |
| Revenue_Coded[T.High 10K+]                         |                  | 1.2598              | 0.695          | 1.812   | 0.878 | -0.103  |
| Transactions_Coded[T.Mid: 6-10]                    |                  | -0.0532             | 0.443          | -0.120  | 0.904 | -0.921  |
| Transactions_Coded[T.Mid_High: 11-50]              |                  | 0.3759              | 0.549          | 0.685   | 0.493 | -0.699  |
| Transactions_Coded[T.High: 50+]                    |                  | 4.8404              | 1.292          | 3.748   | 0.000 | 2.389   |
| Activity2_4Y_Coded[T.Low: 0-2]                     |                  | 0.2958              | 0.667          | 0.442   | 0.658 | -1.012  |
| Activity2_4Y_Coded[T.Mid: 3-5]                     |                  | -0.5863             | 0.641          | -0.915  | 0.368 | -1.843  |
| Activity2_4Y_Coded[T.Mid_High: 6-10]               |                  | -1.4566             | 0.842          | -1.731  | 0.883 | -3.186  |
| Activity2_4Y_Coded[T.High: 10+]                    |                  | 3.6291              | 0.934          | 3.884   | 0.000 | 1.798   |
| ActivityInLast2Y_Coded[T.Low: 1-2]                 |                  | 0.6514              | 0.876          | 0.744   | 0.457 | -1.065  |
| ActivityInLast2Y_Coded[T.Mid: 3-5]                 |                  | -0.3965             | 0.856          | -0.463  | 0.643 | -2.074  |
| ActivityInLast2Y_Coded[T.Mid_High: 6-10]           |                  | -3.7186             | 1.074          | -3.461  | 0.801 | -5.824  |
| ActivityInLast2Y_Coded[T.High: 10+]                |                  | 12.1885             | 1.182          | 10.316  | 0.000 | 9.873   |
| ActivityOver4Y_Coded[T.Low: 1-2]                   |                  | -0.7995             | 0.602          | -1.328  | 0.184 | -1.986  |
| ActivityOver4Y_Coded[T.Mid: 3-5]                   |                  | -0.8928             | 0.548          | -1.653  | 0.098 | -1.952  |
| ActivityOver4Y_Coded[T.Mid_High: 6-10]             |                  | -1.3615             | 0.633          | -2.158  | 0.032 | -2.663  |
| ActivityOver4Y_Coded[T.High: 10+]                  |                  | -1.8611             | 0.543          | -3.429  | 0.001 | -2.925  |
| Company_Employees_Coded[T.Mid: 181-1000]           |                  | -1.3618             | 0.678          | -2.033  | 0.042 | -2.673  |
| Company_Employees_Coded[T.Mid_Big: 1001-5000]      |                  | 1.0804              | 0.601          | 1.797   | 0.072 | -0.098  |
| Company_Employees_Coded[T.Big: 5001-10000]         |                  | 0.5986              | 0.751          | 0.797   | 0.425 | -0.873  |
| Company_Employees_Coded[T.Large Corp: 10001-50000] |                  | 2.3319              | 0.739          | 3.156   | 0.002 | 0.883   |
| Company_Employees_Coded[T.Mega Large: 50000+]      |                  | 1.8648              | 1.031          | 1.809   | 0.078 | -0.156  |
| Demographic_Score_Coded                            |                  | 13.5492             | 0.246          | 55.006  | 0.000 | 13.067  |
| Lifecycle_stage_Coded                              |                  | -0.0047             | 0.305          | -0.015  | 0.988 | -0.603  |
| ConsentType_Coded                                  |                  | 0.6504              | 0.283          | 2.301   | 0.021 | 0.096   |
| canemail_Coded                                     |                  | 0.5438              | 0.823          | 0.668   | 0.509 | -1.070  |
| Has_Downloaded_Coded                               |                  | 1.8873              | 0.629          | 1.753   | 0.088 | -0.128  |
| EmailClicked_Coded                                 |                  | -0.2308             | 0.457          | -0.503  | 0.615 | -1.126  |
| Omnibus:                                           | 72468.579        | Durbin-Watson:      | 1.984          |         |       |         |
| Prob(Omnibus):                                     | 0.000            | Jarque-Bera (JB):   | 2300523914.083 |         |       |         |

## OLS Regression Results

|                   |                  |                     |           |
|-------------------|------------------|---------------------|-----------|
| Dep. Variable:    | Person_Score     | R-squared:          | 0.934     |
| Model:            | OLS              | Adj. R-squared:     | 0.934     |
| Method:           | Least Squares    | F-statistic:        | 1.420e+04 |
| Date:             | Wed, 04 Sep 2019 | Prob (F-statistic): | 8.00      |
| Time:             | 10:16:05         | Log-Likelihood:     | -98528.   |
| No. Observations: | 26132            | AIC:                | 1.971e+05 |
| Df Residuals:     | 26105            | BIC:                | 1.973e+05 |
| Df Model:         | 26               |                     |           |
| Covariance Type:  | nonrobust        |                     |           |

|                       | coef       | std err           | t          | P> t  | [0.025    | 0.975]   |
|-----------------------|------------|-------------------|------------|-------|-----------|----------|
| Intercept             | -30.3953   | 0.336             | -89.065    | 0.000 | -31.058   | -29.732  |
| Rank                  | 0.1874     | 0.020             | 9.280      | 0.000 | 0.148     | 0.227    |
| Demographic_Score     | 0.9259     | 0.006             | 165.463    | 0.000 | 0.915     | 0.937    |
| Behavioral_Score      | 1.0266     | 0.002             | 552.328    | 0.000 | 1.023     | 1.038    |
| Person_Status_Coded   | 0.9834     | 0.091             | 10.858     | 0.000 | 0.886     | 1.161    |
| Lifecycle_stage_Coded | -2.0823    | 0.070             | -28.776    | 0.000 | -2.139    | -1.866   |
| caslconsenttype_Coded | -0.5851    | 0.113             | -5.161     | 0.000 | -0.887    | -0.363   |
| canemail_Coded        | 4.0375     | 0.277             | 14.577     | 0.000 | 3.495     | 4.588    |
| TRANSACTION_COUNT     | -0.1967    | 0.252             | -0.781     | 0.435 | -0.690    | 0.297    |
| PAY_TRANSTYPE         | 0.3901     | 0.263             | 1.485      | 0.138 | -0.125    | 0.905    |
| DIST_TRANSTYPE        | 0.2217     | 0.253             | 0.878      | 0.380 | -0.273    | 0.717    |
| AR_TRANSTYPE          | 0.1250     | 0.255             | 0.493      | 0.622 | -0.374    | 0.625    |
| PP_TRANSTYPE          | -1.7801    | 1.989             | -0.933     | 0.351 | -5.522    | 1.901    |
| TR_TRANSTYPE_X        | 0.8459     | 1.570             | 0.539      | 0.590 | -2.231    | 3.923    |
| AMOUNT                | 5.137e-06  | 3.17e-06          | 1.619      | 0.106 | -1.08e-06 | 1.14e-05 |
| O_AMOUNT              | -5.317e-06 | 3.31e-06          | -1.686     | 0.168 | -1.18e-05 | 1.17e-06 |
| Orders_COUNT          | 0.0427     | 0.059             | 0.728      | 0.472 | -0.874    | 0.159    |
| PUBINV                | 0.0504     | 0.057             | 0.877      | 0.380 | -0.862    | 0.163    |
| GENERAL               | -0.2433    | 0.085             | -2.868     | 0.004 | -0.410    | -0.077   |
| MEETING               | 0.4868     | 0.098             | 4.142      | 0.000 | 0.214     | 0.598    |
| INVOICE               | -0.2404    | 0.049             | -4.925     | 0.000 | -0.336    | -0.145   |
| CM                    | -0.0611    | 0.159             | -0.385     | 0.700 | -0.372    | 0.258    |
| FINRES                | -0.3882    | 0.072             | -4.281     | 0.000 | -0.449    | -0.167   |
| SUBSCRIPT             | -0.0918    | 0.056             | -1.631     | 0.103 | -0.280    | 0.018    |
| EDATAINV              | 0.4365     | 0.163             | 2.682      | 0.007 | 0.118     | 0.755    |
| NCOFE                 | -0.3697    | 0.215             | -1.721     | 0.085 | -0.791    | 0.051    |
| SPONSOR               | -0.6676    | 0.161             | -4.147     | 0.000 | -0.983    | -0.352   |
| Online                | -0.0903    | 0.031             | -2.875     | 0.004 | -0.152    | -0.029   |
| Omnibus:              | 15216.698  | Durbin-Watson:    | 1.872      |       |           |          |
| Prob(Omnibus):        | 0.000      | Jarque-Bera (JB): | 152186.635 |       |           |          |
| SKew:                 | 2.680      | Prob(JB):         | 0.00       |       |           |          |
| Kurtosis:             | 13.538     | Cond. No.:        | 1.01e+16   |       |           |          |

## Warnings:

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The smallest eigenvalue is 1.21e-17. This might indicate that there are strong multicollinearity problems or that the design matrix is singular.

| Model:                        | OLS              | Adj. R-squared:     | 0.935      |       |           |          |
|-------------------------------|------------------|---------------------|------------|-------|-----------|----------|
| Method:                       | Least Squares    | F-statistic:        | 1.099e+04  |       |           |          |
| Date:                         | Wed, 04 Sep 2019 | Prob (F-statistic): | 0.08       |       |           |          |
| Time:                         | 10:32:00         | Log-Likelihood:     | -98379.    |       |           |          |
| No. Observations:             | 26132            | AIC:                | 1.968e+05  |       |           |          |
| Df Residuals:                 | 26097            | BIC:                | 1.971e+05  |       |           |          |
| Df Model:                     | 34               |                     |            |       |           |          |
| Covariance Type:              | nonrobust        |                     |            |       |           |          |
|                               | coef             | std err             | t          | P> t  | [0.025    | 0.975]   |
| Intercept                     | -24.7475         | 0.670               | -36.939    | 0.000 | -26.061   | -23.434  |
| C(Lifecycle_stage_Coded)[T.1] | -3.8972          | 0.229               | -17.003    | 0.000 | -4.346    | -3.448   |
| C(Lifecycle_stage_Coded)[T.2] | -6.6147          | 0.285               | -21.228    | 0.000 | -7.173    | -6.057   |
| C(Lifecycle_stage_Coded)[T.3] | -6.8600          | 0.286               | -24.019    | 0.000 | -7.420    | -6.300   |
| C(Lifecycle_stage_Coded)[T.4] | -3.4279          | 0.979               | -3.502     | 0.000 | -5.347    | -1.589   |
| C(Lifecycle_stage_Coded)[T.5] | -7.2114          | 0.754               | -9.566     | 0.000 | -8.689    | -5.734   |
| C(caslconsenttype_Coded)[T.1] | 1.3580           | 0.433               | 3.136      | 0.002 | 0.509     | 2.207    |
| C(caslconsenttype_Coded)[T.2] | -4.7229          | 0.629               | -7.509     | 0.000 | -5.956    | -3.496   |
| C(caslconsenttype_Coded)[T.3] | -5.5493          | 0.643               | -8.636     | 0.000 | -6.809    | -4.296   |
| C(caslconsenttype_Coded)[T.4] | -5.2669          | 0.699               | -7.531     | 0.000 | -6.638    | -3.896   |
| C(caslconsenttype_Coded)[T.5] | -2.0688          | 3.879               | -0.533     | 0.594 | -9.673    | 5.535    |
| C(canemail_Coded)[T.1..0]     | -0.3786          | 0.680               | -0.518     | 0.537 | -1.546    | 0.885    |
| Rank                          | 0.1263           | 0.029               | 4.396      | 0.000 | 0.070     | 0.183    |
| Demographic_Score             | 0.9255           | 0.086               | 105.594    | 0.000 | 0.915     | 0.936    |
| Behavioral_Score              | 1.0259           | 0.002               | 553.551    | 0.000 | 1.022     | 1.030    |
| Person_Status_Coded           | 0.8123           | 0.093               | 8.772      | 0.000 | 0.631     | 0.994    |
| TRANSACTION_COUNT             | -0.2188          | 0.250               | -0.842     | 0.400 | -0.702    | 0.280    |
| PAY_TRANSTYPE                 | 0.3922           | 0.261               | 1.501      | 0.133 | -0.120    | 0.904    |
| DIST_TRANSTYPE                | 0.2353           | 0.251               | 0.937      | 0.349 | -0.257    | 0.728    |
| AR_TRANSTYPE                  | 0.1485           | 0.253               | 0.586      | 0.558 | -0.348    | 0.645    |
| PP_TRANSTYPE                  | -1.7525          | 1.898               | -0.923     | 0.356 | -5.473    | 1.968    |
| TR_TRANSTYPE_X                | 0.7658           | 1.561               | 0.490      | 0.624 | -2.294    | 3.826    |
| AMOUNT                        | 5.235e-06        | 3.16e-06            | 1.658      | 0.097 | -9.52e-07 | 1.14e-05 |
| O_AMOUNT                      | -5.44e-06        | 3.29e-06            | -1.652     | 0.099 | -1.19e-05 | 1.01e-06 |
| Orders_COUNT                  | -0.0072          | 0.059               | -0.121     | 0.903 | -0.123    | 0.189    |
| PUBINV                        | 0.0863           | 0.057               | 1.501      | 0.133 | -0.026    | 0.199    |
| GENERAL                       | -0.1863          | 0.085               | -2.204     | 0.028 | -0.352    | -0.821   |
| MEETING                       | 0.3704           | 0.098               | 3.777      | 0.000 | 0.178     | 0.563    |
| INVOICE                       | -0.1943          | 0.049               | -3.994     | 0.000 | -0.290    | -0.099   |
| CM                            | -0.0651          | 0.158               | -0.412     | 0.680 | -0.375    | 0.245    |
| FINRES                        | -0.2520          | 0.072               | -3.515     | 0.000 | -0.393    | -0.111   |
| SUBSCRIPT                     | -0.0733          | 0.056               | -1.319     | 0.187 | -0.182    | 0.836    |
| EDATAINV                      | 0.4145           | 0.162               | 2.561      | 0.010 | 0.097     | 0.732    |
| NCOFE                         | -0.4306          | 0.214               | -2.015     | 0.044 | -0.850    | -0.012   |
| SPONSOR                       | -0.5654          | 0.180               | -3.528     | 0.000 | -0.879    | -0.251   |
| Online                        | -0.0459          | 0.031               | -1.458     | 0.145 | -0.108    | 0.016    |
| Omnibus:                      | 15176.036        | Durbin-Watson:      | 1.091      |       |           |          |
| Prob(Omnibus):                | 0.000            | Jarque-Bera (JB):   | 153728.190 |       |           |          |
| Skew:                         | 2.065            | Prob(JB):           | 0.00       |       |           |          |
| Kurtosis:                     | 13.620           | Cond. No.           | 1.01e+16   |       |           |          |

## **Project1: Data Science Employment Status**

## **Project2: Vehicles Fuel Consumption**

Project1 Research Question:

- **What is the current status of Data Science?**

Other Questions:

- What are the key educational backgrounds of the current Data Scientists and Data Analysts?
- What are the key programming languages ? Do they really increase the chances of employment?
- Who switch career into Data Science or Data Analysis? Why?
- What are the chances of female data scientist/analyst to find a job?
- What are the key features of Canada's D.S market, and how is it different?

Key Challenges:

- Absence of code book that facilitate selection and formatting variables, groups, and categories.
- Mixed Data type and object that required harmonization and extra preprocessing.

The Statistical Methodology:

- **Logistic regression**

- The binary logistic model is used to estimate the probability of a binary response ( Dependent Variable) based on one or more predictor (or independent) variables (features).
- It allows one to say that the presence of a risk factor increases the odds of a given outcome by a specific factor. The model itself simply models probability of output in terms of input.

The Project Data

This project uses Kaggle's survey (2017-2018) to establish a comprehensive view of the state of data science and analysis. The data set contains **16,000 responses** and covering who is working with data, what's happening at the cutting edge of machine learning across industries, and how new data scientists can best break into the field.

A Data subset was sliced and created to include the following variables: 'Gender', 'Country', 'Age', 'Employment', 'Student\_Status', 'Code\_Writer', 'Career\_Switcher', 'Current\_Job\_Title', 'Language\_Recommendation', 'Time\_Spent\_Studying', 'Education', and 'Field\_of\_Education'.

- A Canadian Data set was sliced also to compare Canada to the International Market.

The Python Methodology

- **Stage One: Data Cleaning & Manipulation**

The following packages initially was imported for later procedure: 'numpy as np', 'pandas as pd', 'os', 'matplotlib.pyplot as plt', 'statsmodels.api as sm', 'statsmodels.formula.api as smf', and 'seaborn as sns'.

This is followed by further cleaning, manipulation and conversion as follows:

**Binning:** e.g. G\_bins = [0,1,2,3,4]

**Grouping & Labeling:** e.g. G\_labels = { "Non-binary, genderqueer, or gender non-conforming": 0, "A different identity": 1, "Female": 2, "Male": 3}

**Re-Categorizing & Coding:** e.g. Data\_Scientist['Gender\_Cat'] = coding(Data\_Scientist['Gender'], {"Non-binary", "genderqueer, or gender non-conforming": 0, "A different identity": 1, "Female": 2, "Male": 3})

**Cleaning & Manipulation:** e.g. Data\_Scientist['Gender\_Cat'] = Data\_Scientist['Gender\_Cat'].fillna(0)

**Reframing & restructuring:** e.g. Data\_Scientist['Gender\_Labeled'] = pd.cut(Data\_Scientist.Gender\_Cat, G\_bins, labels = G\_labels, right=False)

- **Stage 2: Running Statistical Tests, Scatters, and Boxplots**

In this stage, join box plots and different regression models were conducted to test and inspect correlations and associations between the variables. R-squared was about .95 which reflect a robust model looking the significance level of the p-values.

For more details about the model results of the models, see appendix (A).

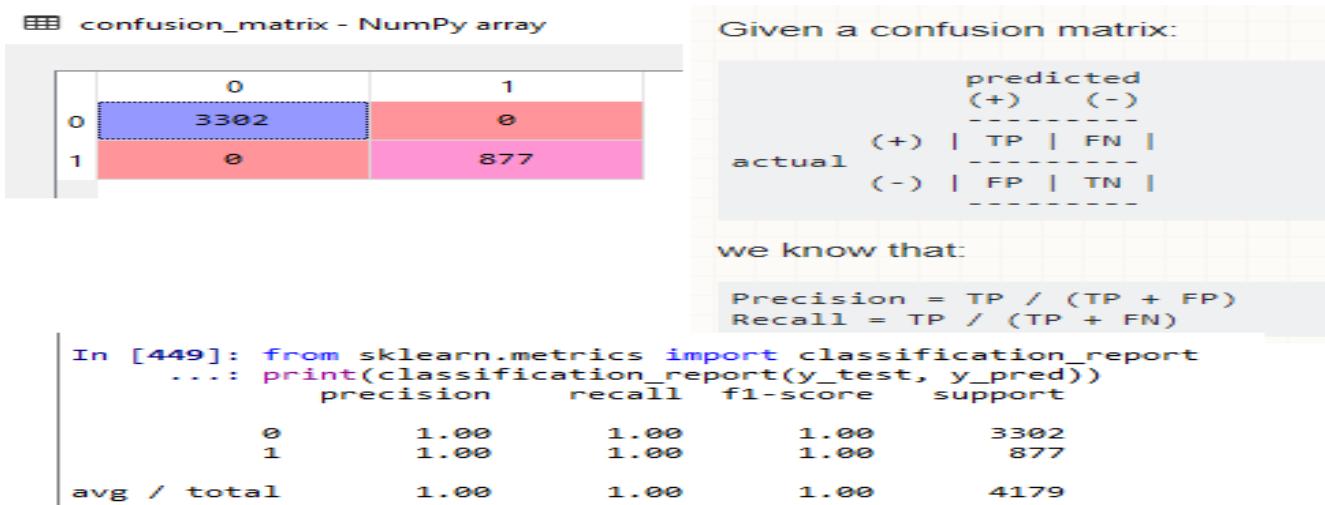
| Dep. Variable:                                    | employment_cat   | R-squared:          | 0.953         |       |           |       |
|---------------------------------------------------|------------------|---------------------|---------------|-------|-----------|-------|
| Model:                                            | DLS              | AIC: R-squared:     | 0.953         |       |           |       |
| Method:                                           | Least Squares    | F-STATISTIC:        | 1.318e+04     |       |           |       |
| Date:                                             | Sun, 22 Sep 2018 | Prob (F-statistic): | 0.953         |       |           |       |
| Time:                                             | 11:27:37         | Log-Likelihood:     | -2.274e+04    |       |           |       |
| No. Observations:                                 | 16133            | AIC:                | -3.548e+04    |       |           |       |
| DF Residuals:                                     | 16137            | BIC:                | -3.254e+04    |       |           |       |
| DF Model:                                         | 25               |                     |               |       |           |       |
| Covariance Type:                                  | nonrobust        |                     |               |       |           |       |
| Intercept                                         | 0.074            | 0.010               | 6.858         | 0.000 | 0.068     | 0.907 |
| Field_of_Education_Labeled[T.Social Science]      | -0.082           | 0.004               | -0.271        | 0.481 | -0.030    | 0.894 |
| Field_of_Education_Labeled[T.Natural Sciences]    | 0.006            | 0.002               | 0.255         | 0.799 | -0.004    | 0.903 |
| Field_of_Education_Labeled[T.Engineering]         | -0.976e-05       | 0.003               | 0.027         | 0.978 | -0.005    | 0.895 |
| Field_of_Education_Labeled[T.Computer Science/IT] | 0.002            | 0.002               | 1.027         | 0.305 | -0.002    | 0.907 |
| Education_Labeled[T.Some College]                 | 0.061            | 0.004               | 16.439        | 0.000 | 0.056     | 0.972 |
| Education_Labeled[T.Bachelor]                     | 0.064            | 0.003               | 17.556        | 0.000 | 0.055     | 0.968 |
| Education_Labeled[T.Master]                       | 0.052            | 0.004               | 17.137        | 0.000 | 0.053     | 0.957 |
| Education_Labeled[T.MD]                           | 0.069            | 0.004               | 15.448        | 0.000 | 0.053     | 0.968 |
| Gender_Labeled[T.A different identity]            | 0.024            | 0.012               | 2.327         | 0.020 | 0.004     | 0.952 |
| Gender_Labeled[T.Female]                          | 0.048            | 0.018               | 8.419         | 0.675 | -0.015    | 0.823 |
| Gender_Labeled[T.Male]                            | 0.003            | 0.018               | 0.401         | 0.608 | -0.015    | 0.922 |
| Age_group[T.25-34]                                | -0.059           | 0.002               | -4.731        | 0.009 | -0.013    | 0.885 |
| Age_group[T.35-44]                                | -0.009           | 0.002               | -2.925        | 0.000 | -0.014    | 0.805 |
| Age_group[T.45-65]                                | 0.015            | 0.003               | 0.619         | 0.000 | 0.011     | 0.823 |
| Student_Labeled[T.Student]                        | 0.845            | 0.003               | 38.153        | 0.000 | 0.028     | 0.843 |
| StudyTime_PerWeek_Labeled[T.2 - 10 hours]         | 0.020            | 0.003               | 9.715         | 0.000 | 0.021     | 0.952 |
| StudyTime_PerWeek_Labeled[T.11 - 39 hours]        | 0.838            | 0.004               | 8.685         | 0.000 | 0.028     | 0.849 |
| StudyTime_PerWeek_Labeled[T.40+]                  | 0.949            | 0.007               | 5.721         | 0.000 | 0.027     | 0.955 |
| Language_Recommendation_Labeled[T.SAS]            | 0.818            | 0.018               | 1.688         | 0.093 | -0.003    | 0.853 |
| Language_Recommendation_Labeled[T.SQL]            | 0.0074           | 0.005               | 1.568         | 0.118 | -0.002    | 0.917 |
| Language_Recommendation_Labeled[T.R]              | 0.0043           | 0.002               | 1.954         | 0.051 | -1.27e-05 | 0.009 |
| Language_Recommendation_Labeled[T.Python]         | 0.0046           | 0.002               | 2.648         | 0.008 | 0.001     | 0.908 |
| Code_Writer_Labeled[T.Code Writer]                | -0.944           | 0.003               | -357.098      | 0.000 | -0.058    | 0.949 |
| Career_Switcher_Labeled[T.Not A Switcher]         | 0.879            | 0.005               | -192.766      | 0.000 | -0.009    | 0.873 |
| Career_Switcher_Labeled[T.Switcher]               | -0.962           | 0.003               | -353.065      | 0.000 | -0.066    | 0.955 |
| Omnibus:                                          | 2490.296         | Durbin-Watson:      | 2.032         |       |           |       |
| PseudoFisher'sR:                                  | 0.998            | Jarque-Bera (JB):   | 69033.113,385 |       |           |       |
|                                                   |                  |                     | 0.000         |       |           |       |

## Model Findings

- Surprisingly, Canada's market for Data Science and Analysis does not require formal education, but perhaps more professional designations. This is unlike the international market that requires formal education with tendency to require more Master's degrees.
- There is a slight increase in tendency for hiring female Data Scientist, although being statistically insignificant.
- Surprisingly, Canadian market appeals more to R and SAS than the International market appealing to python.
- The international market most fitted age groups is (45-65), while Canada's age group is (25-44).
- There is a positive association between career switching and job employment.
- Social Science is the least to be hired internationally, and natural science is the least in Canada.

## Accuracy vs. Precision

The confusion matrix reflected only true positive and negative values which resulted in having precision, recall, and f1score equal 1.

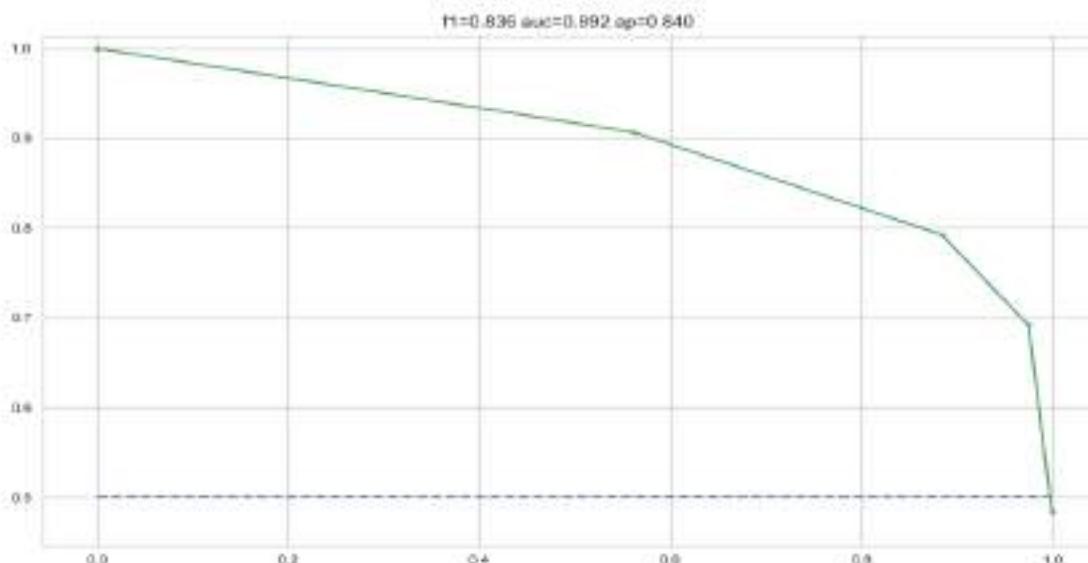


So, other performance measurement was considered to examine the previous results. Precision-Recall Curves in KNN logarithm (KNeighborsClassifier) was used for classification setting. The K-nearest neighbor algorithm essentially boils down to forming a majority vote between the K most similar instances to a given “unseen” observation. Similarity is defined according to a distance metric between two data points.

The average precision can be calculated by calling the `average_precision_score()` function and passing it the true class values and the predicted class value.

The **F1 score** (also **F-score** or **F-measure**) is a measure of a test's accuracy. It considers both the *p* precision and the *r* recall of the test to compute the score: *p* is the number of correct positive results divided by the number of all positive results returned by the classifier, and *r* is the number of correct positive results divided by the number of all relevant samples

The final results considering the ROC AUC curves along with the other measurements showed a slight decrease in the performance measurements values as below: F1 = .836, AUC= .892, AP=.84.



- What is the current status of Data Science?

## Project Data

- The US Government Source for Fuel Economy Information ([www.fueleconomy.gov](http://www.fueleconomy.gov))
- The data set contains **40,000 rows** and 84 columns of vehicles and their fuel consumption data.
- Data subset was created including the following variables:
  - IDV: 'Make Year', 'cylinders', 'Engine\_Size', 'Fuel\_Cost', 'Car\_Model', 'City\_Consumption', 'HW\_Consumption',
  - DV: 'Consumption\_Barrel '
- Research Question:
  - **What could influence vehicles fuel consumption?**

After cleaning the data from noisy and NA data, an initial regression model was run in order to inspect some critical values and statistical indicators such as the r-squared and the p-values.

Regression analysis generates an equation to describe the statistical relationship between one or more predictor variables and the response variable.

The p-value for each term tested the null hypothesis that the coefficient is equal to zero (no effect). A low p-value (< 0.05) indicates that you can reject the null hypothesis. In other words, a predictor that has a low p-value is likely to be a meaningful addition to your model because changes in the predictor's value are related to changes in the response variable.

Conversely, a larger (insignificant) p-value suggests that changes in the predictor are not associated with changes in the response.

In the output below, we can see that the predictor variables are significant because both of their p-values are 0.000.

Regression coefficients represent the mean change in the response variable for one unit of change in the predictor variable while holding other predictors in the model constant.

R-squared is a statistical measure of how close the data are to the fitted regression line. It is also known as the coefficient of determination, or the coefficient of multiple determinations for multiple regressions.

## Model Findings

- The fuel consumption level increases with the increase of the in-city driving and engine size, while decrease when the increase of the number of the cylinders and the hightway driving as well as the make-year of the vehicles.
- The p-values show high significance level of the predictors (IDV).
- The R-squared shows good fitted regression line, but raise the question of if there is overfitting or not.
- 10 K-fold cross validation validates the strength of the model training and testing sets at a mean of .64 of accuracy.

```
In [23]: reg = LinearRegression()
In [24]: reg.fit(X,y)
Out[24]: LinearRegression(copy_X=True,
 fit_intercept=True, n_jobs=1, normalize=False)
In [25]: reg.score(X,y)*** # 约0.91
Out[25]: 0.9127130961885421
In [26]: print(reg.coef_, reg.intercept_)
[[-8.31686793 1.88549937 2.42951194 0.444484372
 -1.8447987 -8.03950516]] [96.5538633]
```

OLS Regression Results

| Dep. Variable:    | Consumption_Barrel | R-squared:          | 0.913        |       |        |        |                                  |
|-------------------|--------------------|---------------------|--------------|-------|--------|--------|----------------------------------|
| Model:            | OLS                | Adj. R-squared:     | 0.913        |       |        |        |                                  |
| Method:           | Least Squares      | F-statistic:        | 6.610e+04    |       |        |        |                                  |
| Date:             | Sat, 13 Oct 2018   | Prob (F-statistic): | 0.00         |       |        |        |                                  |
| Time:             | 23:18:51           | Log-Likelihood:     | -65151.      |       |        |        |                                  |
| No. Observations: | 37936              | AIC:                | 1.303e+05    |       |        |        |                                  |
| Df Residuals:     | 37929              | BIC:                | 1.304e+05    |       |        |        |                                  |
| Df Model:         | 6                  |                     |              |       |        |        |                                  |
| Covariance Type:  | nonrobust          |                     |              |       |        |        |                                  |
|                   |                    | coef                | std err      | t     | P> t   | [0.025 | 0.975]                           |
| Intercept         | 91.0857            | 1.452               | 62.729       | 0.000 | 88.248 | 93.932 |                                  |
| cylinders         | -0.1811            | 0.010               | -18.090      | 0.000 | -0.201 | -0.161 |                                  |
| Engine_Size       | 0.7856             | 0.013               | 62.147       | 0.000 | 0.761  | 0.810  |                                  |
| Fuel_Cost         | 0.0047             | 2.59e-05            | 161.882      | 0.000 | 0.005  | 0.005  |                                  |
| City_Consumption  | 0.8474             | 0.002               | 23.566       | 0.000 | 0.843  | 0.851  |                                  |
| HV_Consumption    | -0.1841            | 0.002               | -77.752      | 0.000 | -0.189 | -0.179 |                                  |
| Make_Year         | -0.0395            | 0.001               | -53.494      | 0.000 | -0.041 | -0.038 |                                  |
| Omnibus:          | 45318.828          | Durbin-Watson:      | 1.199        |       |        |        | classifier.score(X_test, y_test) |
| Prob(Omnibus):    | 0.000              | Jarque-Bera (JB):   | 17512867.316 |       |        |        | -25.666432548148246              |
| Skew:             | -5.952             | Prob(JB):           | 0.00         |       |        |        |                                  |
| Kurtosis:         | 187.584            | Cond. No.:          | 5.84e+05     |       |        |        |                                  |

Warnings:

- [1] Standard Errors assume that the covariance matrix of the errors is correctly specified.
- [2] The condition number is large, 5.84e+05. This might indicate that there are strong multicollinearity or other numerical problems.

```
In [39]: print("y_pred = classifier.predict(X_test): ", y_pred)
y_pred = classifier.predict(X_test): [131.58329971 138.75287971 132.27625329 ... 142.94926789 142.29985045
150.1784256]
```

## ■ accuricies - NumPy array

```
In [65]: accuricies.mean()
Out[65]: 0.6429339109872216
```

| 0        |
|----------|
| 0.85096  |
| 0.836802 |
| 0.753535 |
| 0.471393 |
| 0.454971 |
| 0.666795 |
| 0.560117 |
| 0.757872 |
| 0.738001 |
| 0.338893 |

```
from sklearn.model_selection import cross_val_score
accuricies = cross_val_score(estimator = classifier, X= X_train, y= y_train, cv=10)
accuricies_mean = accuricies.mean()
```

**References:**

<https://www.fueleconomy.gov/feg/download.shtml>

<https://data.world/doe/fuel-economy-data>

<https://catalog.data.gov/dat>

<https://www.kaggle.com/surveys/2017>

# Darfurians Displacement Analysis: Security Vs. Economy

DCPSF Phase 2 - October 2013

## Introduction

Darfur Community Peace and Stability Fund (DCPSF) was set up to address community level conflicts peace-building activities and foster social cohesion by drawing diverse communities together through processes of dialogue and consultations and address root causes of conflict through various activities that provide dividends of peace in Darfur.

DCPSF Phase 2, which covers from 2011 to 2015, continues with the same goal to stabilize communities and restore trust and confidence between communities paving the way towards early recovery.

DCPSF has in the past two years carried out Darfur wide conflict analysis workshops and draw from different actors in Darfur, the hotspots, issues of conflict and actors of conflict from which DCPSF is able to prioritize thematic issues to be addressed.

**Following are the key topics that investigate displacement via conflict analysis carried out in 2013 with a lens of community level conflicts and their actors.**

1. Conflict Hotspot Localities in Darfur
2. Root Structural Causes of Conflict
3. Hidden Causes of Conflict
4. Conflict Resolution Remedies



**UNAMID**

## Main Hypotheses

1. Former conflicts is manifested in economic marginalization, governance and political representation and unequal distribution of services in Darfur compared to the rest of Sudan

### Other Hypotheses/Causes

1. Tribal Tension
2. Local Power Relations
3. Land Ownership
4. Ethnic Tension

## Description of Data

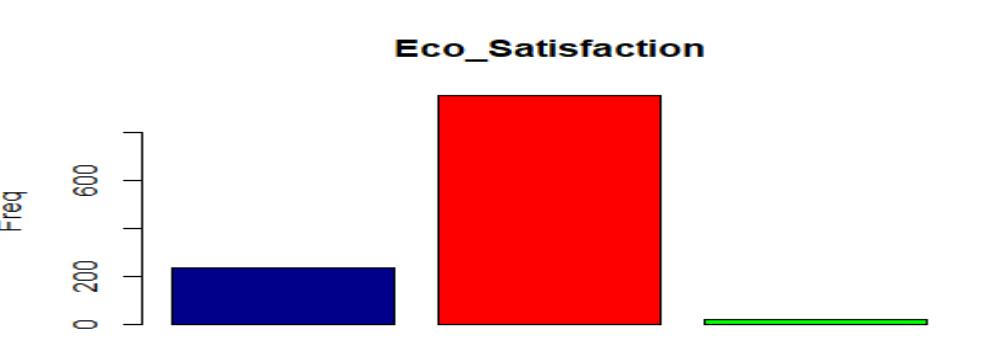
- Data obtained from primary and secondary sources and integrated into one dataset of 1200 observations.
- Primary data were collected via dispatching specialized ethno-linguistic teams to carry out pre-authorized interviews, surveys, and questionnaires in localities of Darfur.
- Secondary Data was collected from different regional indexes such as Arab Democracy Barometer Wave 3, and Sudan Official Statistics of Darfur destroyed villages.

## Data Challenges

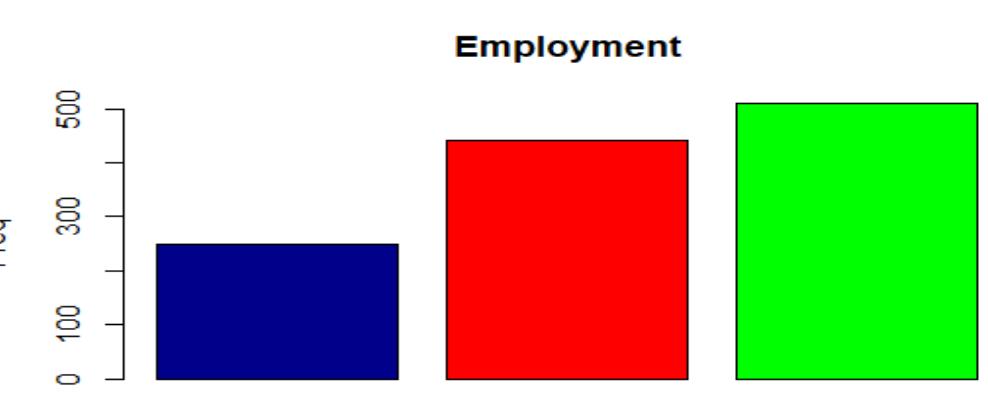
- No Interviews were possible to be conducted – at that time – to investigate reasons of violence of committers
- Missing values have been replaced either by the medians or by a global constant “Unknown”, and in some cases, mice computation code in R.
- Data collection processes had major delays and technical issues due to security concerns and instability
- High quality data integration requires combining data from multiple coherent and trust-worthy sources. Unfortunately, due to the lack of insufficient data and the reliability issues of the secondary data, several models have been tested on several data subsets in order to verify the quality.
- Noisy data have been dealt with via Binning methods.
- All respondents did not provide their ethnicity. Thus, first and second language features used to indicate to ethnicity.
- Data transformation required to import different file types of over than 150000 observation, mainly from Stata file and transform it into R and then xls file. Some problems were related to transposing.

## Visualization of Key Features

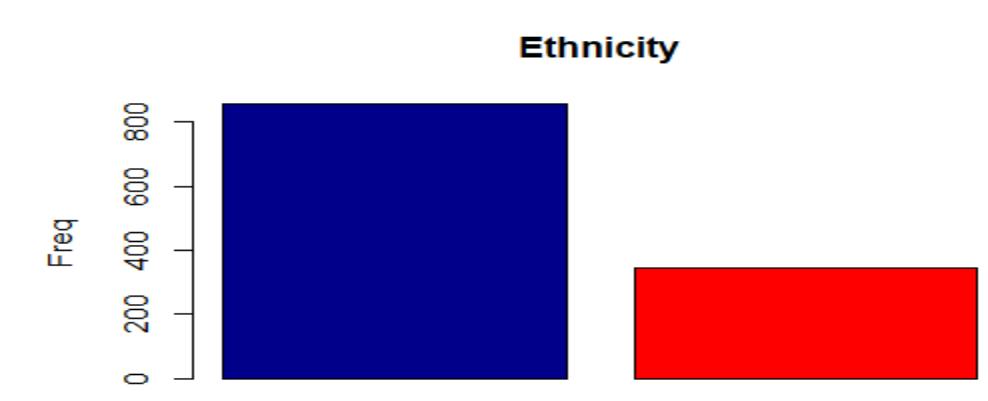
### Economic Satisfaction



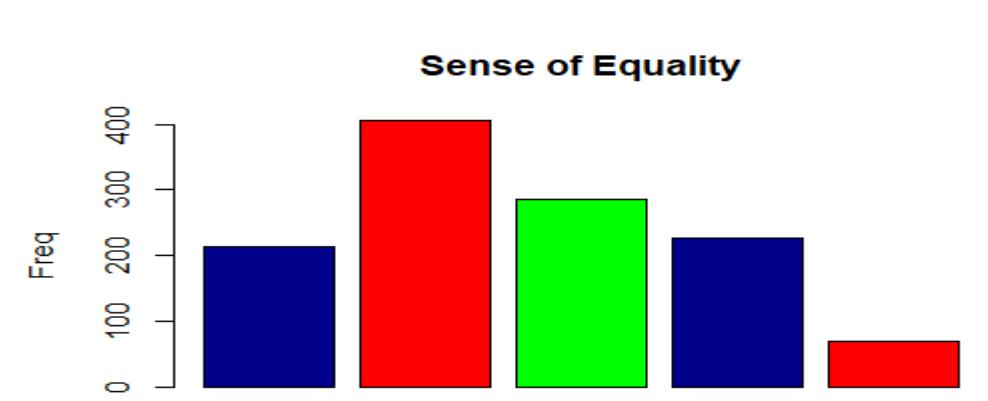
### Employment



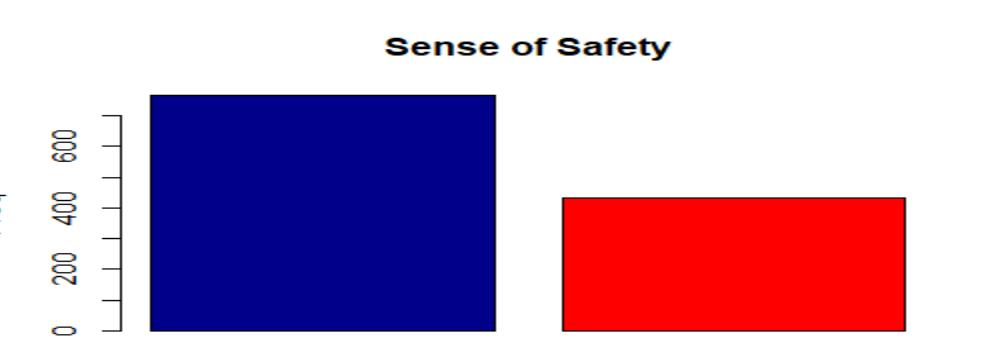
### Ethnicity



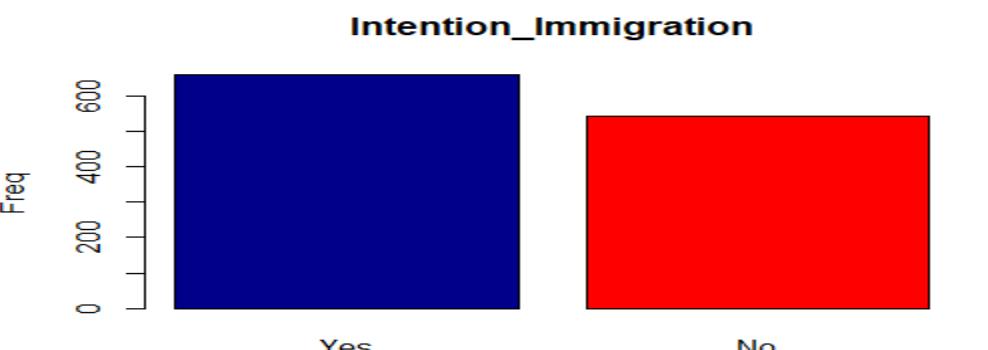
### Sense of Equality



### Sense of Safety

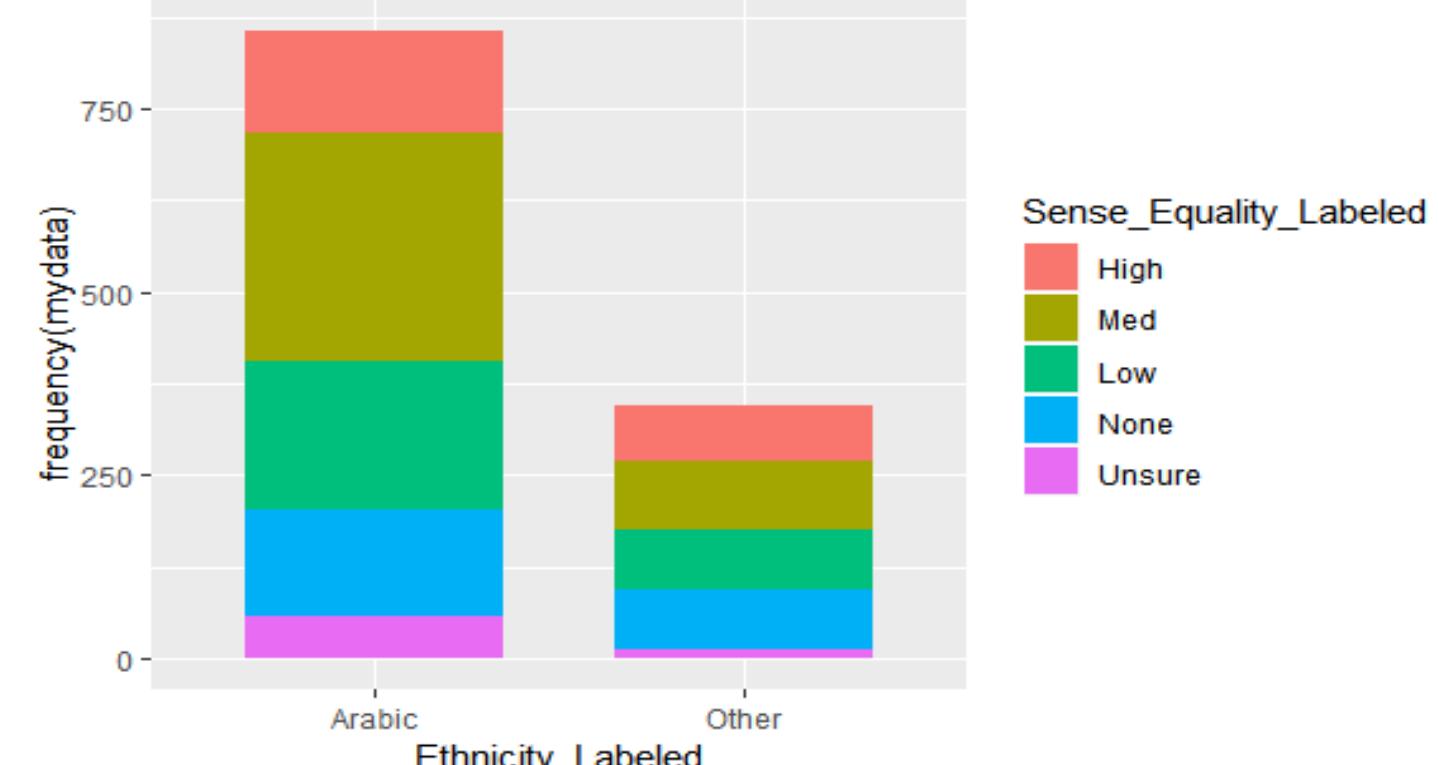


### Intention to Immigrate

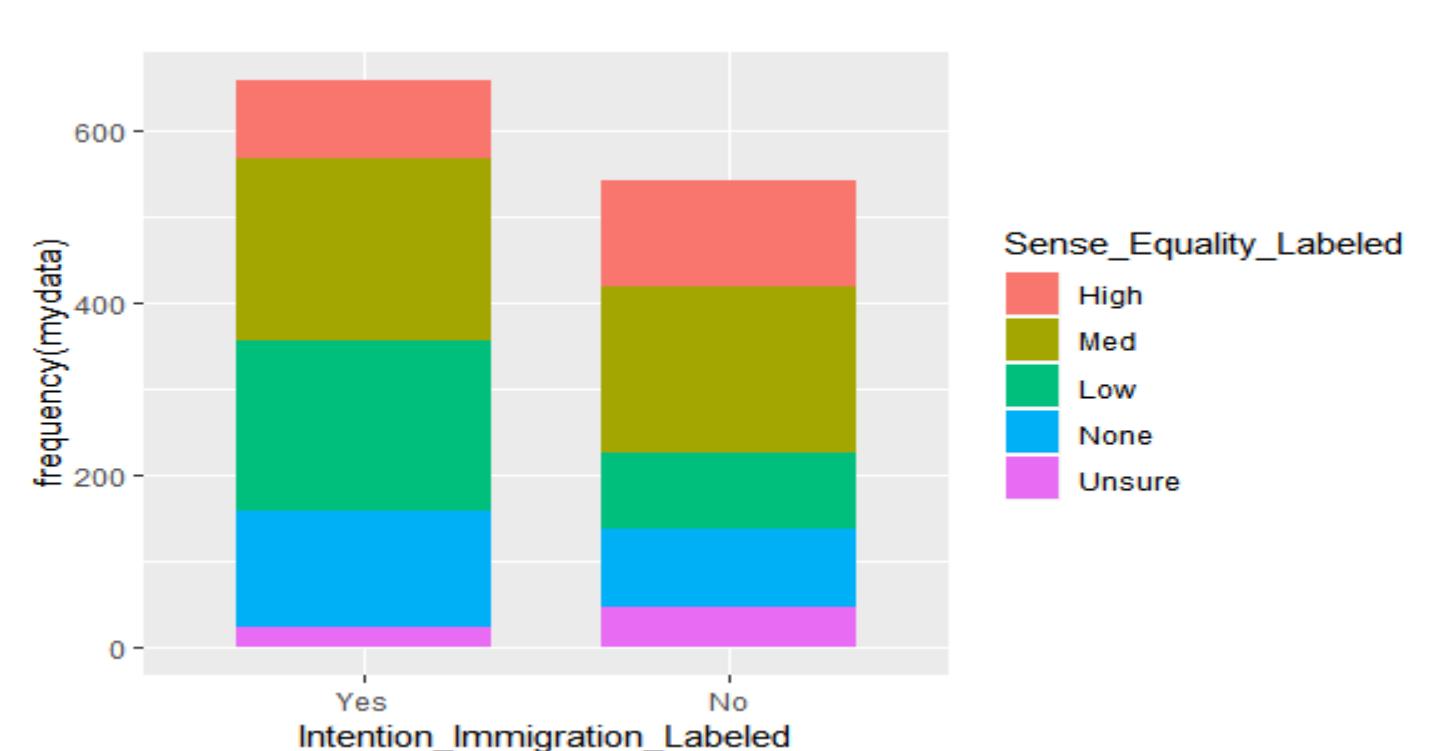


## More Visualization

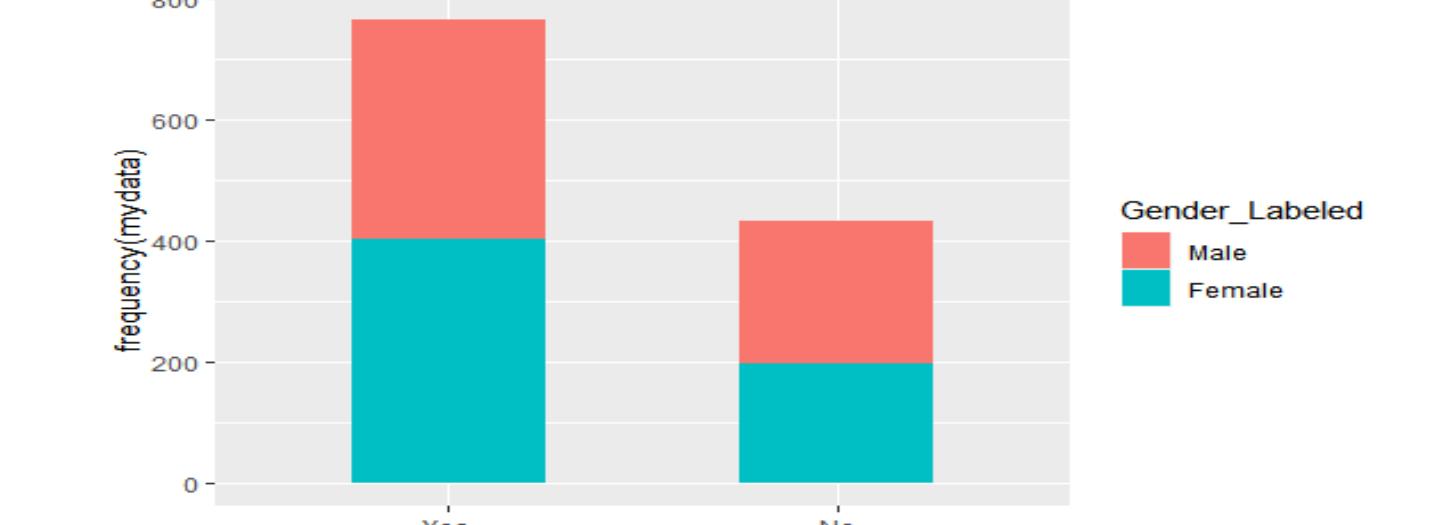
### Sense of Equality by Ethnicity



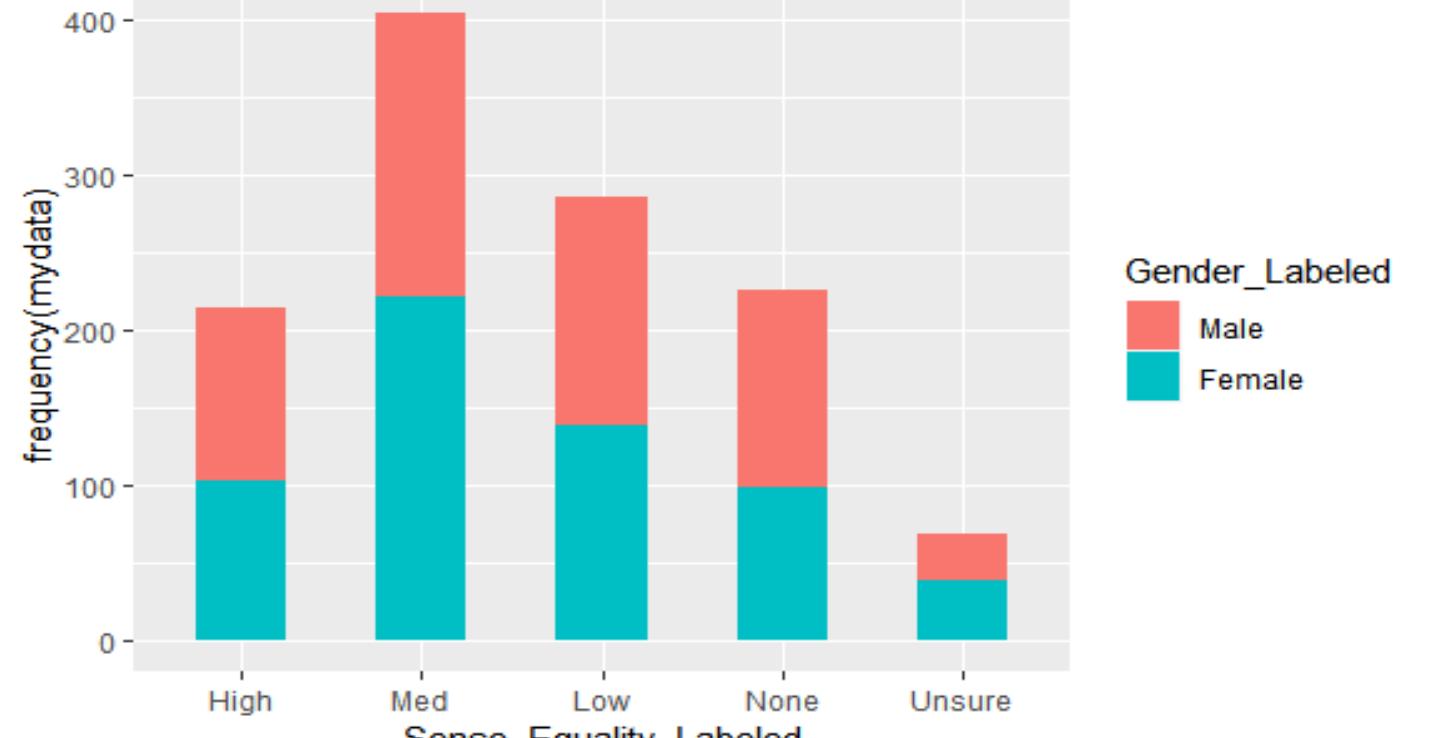
### Immigration by Sense of Equality



### Sense of Safety by Gender

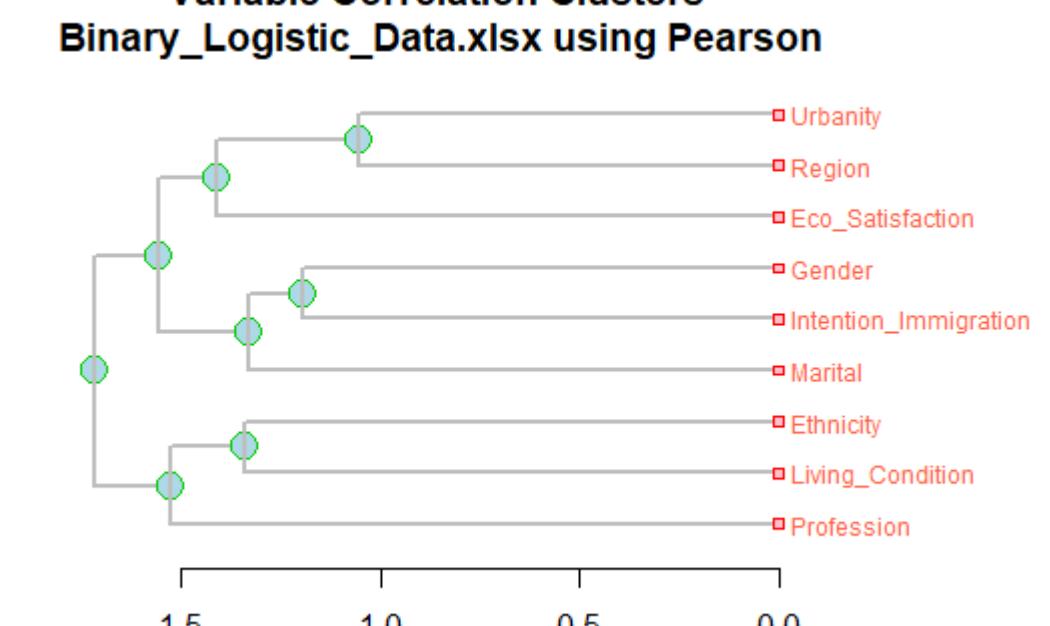


### Sense of Equality by Gender



## Pearson Correlations

### Variable Correlation Clusters



## Models Results

```
glm(formula = Sense_Safety_Labeled ~ Intention_Immigration_Labeled +
Region_Labeled + Urbanity_Labeled + Gender_Labeled + Eco_Satisfaction_Labeled +
Marital_Labeled + Living_Condition_Labeled + Profession_Labeled +
Ethnicity_Labeled, family = binomial, data = Binary_Logistic_Data)
```

Deviance Residuals:  
Min -2.0173 IQ -0.8018 Median -0.4347 3Q 0.9036 Max 2.7468

coefficients: (1 not defined because of singularities)

| (Intercept)                     | Estimate  | Std. Error | z value | Pr(> z )     |
|---------------------------------|-----------|------------|---------|--------------|
| Intention_Immigration_LabeledNo | -0.46894  | 0.31054    | -1.515  | 0.00184 **   |
| Region_LabeledN_Darfur          | 2.01309   | 0.18863    | 10.672  | 2e-16 ***    |
| Region_LabeledS_Darfur          | 1.47319   | 0.19634    | 7.503   | 6.22e-16 *** |
| Region_LabeledE_Darfur          | -15.49297 | 362.10218  | -0.043  | 0.96587      |
| Region_LabeledW_Darfur          | 2.01309   | 0.18863    | 10.672  | 2e-16 ***    |
| Urbanity_LabeledMed             | -0.37270  | 0.15652    | -2.381  | 0.01725 *    |
| Gender_LabeledFemale            | -0.28348  | 0.15225    | -1.862  | 0.06262 .    |
| Eco_Satisfaction_LabeledBad     | 1.65834   | 0.22642    | 7.324   | 2.41e-13 *** |
| Eco_Satisfaction_LabeledUnsure  | 0.94479   | 0.16360    | 5.685   | 0.13766      |
| Marital_LabeledMarried          | -0.26843  | 0.40128    | 0.669   | 0.50354      |
| Living_Condition_LabeledSimilar | 1.02579   | 0.22828    | 4.494   | 7.00e-06 *** |
| Living_Condition_LabeledWorse   | -0.09494  | 0.18726    | -0.507  | 0.61216      |
| Profession_LabeledEmployed      | 0.69223   | 0.06902    | 1.136   | 0.25582      |
| Profession_LabeledUnemployed    | 0.061     | 0.20902    | 0.292   | 0.76966      |
| Profession_LabeledIndured       | NA        | NA         | NA      | NA           |
| Ethnicity_LabeledOther          | 0.21599   | 0.16423    | 1.315   | 0.18863      |

---

Signif. codes: 0 \*\*\* 0.001 \*\* 0.01 \* 0.05 . 0.1 ' 1

Dispersion parameter for binomial family taken to be 1

Null deviance: 1570.5 on 1199 degrees of freedom  
Residual deviance: 1229.6 on 1183 degrees of freedom  
AIC: 1263.6

Number of Fisher Scoring iterations: 15

Deviance Residuals:  
Min -1.8574 IQ -0.9960 Median -0.6204 3Q 1.0639 Max 2.0940

coefficients: (1 not defined because of singularities)

| (Intercept)                     | Estimate  | Std. Error | z value | Pr(> z )     |
|---------------------------------|-----------|------------|---------|--------------|
| Region_LabeledN_Darfur          | -0.149514 | 0.236261   | -0.633  | 0.526842     |
| Region_LabeledS_Darfur          | -0.002614 | 0.176275   | -0.015  | 0.988169     |
| Region_LabeledE_Darfur          | -0.056704 | 0.184889   | -0.307  | 0.759078     |
| Region_LabeledW_Darfur          | -0.166929 | 0.359929   | -0.464  | 0.642803     |
| Urbanity_LabeledRural           | -1.223163 | 0.306221   | -3.994  | 6.49e-05 *** |
| Gender_LabeledFemale            | 0.574967  | 0.137296   | 4.188   | 2.82e-05 *** |
| Eco_Satisfaction_LabeledBad     | -0.554963 | 0.166855   | -3.326  | 0.000881 *** |
| Eco_Satisfaction_LabeledUnsure  | 0.339234  | 0.568650   | 0.597   | 0.550801     |
| Marital_LabeledMarried          | 0.888957  | 0.175817   | 5.056   | 4.28e-07 *** |
| Marital_LabeledDivorced         | 0.867420  | 0.362171   | 2.395   | 0.016618 *   |
| Living_Condition_LabeledSimilar | -0.361212 | 0.211662   | -1.707  | 0.087906 *   |
| Living_Condition_LabeledWorse   | -0.273312 | 0.165713   | -1.649  | 0.098865 *   |
| Sense_Safety_LabeledUnsure      | -0.636241 | 0.612281   | -1.023  | 0.298674 *   |
| Profession_LabeledEmployed      | -0.431399 | 0.148747   | -2.903  | 0.036995 **  |
| Profession_LabeledUnemployed    | 0.148388  | 0.183387   | 0.809   | 0.418428     |
| Profession_LabeledIndured       | NA        | NA         | NA      | NA           |
| Ethnicity_LabeledOther          | -0.572374 | 0.149294   | -3.834  | 0.000126 *** |

Signif. codes: 0 \*\*\* 0.001 \*\* 0.01 \* 0.05 . 0.1 ' 1

Dispersion parameter for binomial family taken to be 1

Null deviance: 1652.3 on 1199 degrees of freedom  
Residual deviance: 1475.9 on 1183 degrees of freedom  
AIC: 1509.9

Number of Fisher Scoring iterations: 4

## Conclusion

- Urbanity drives less Darfurians to relocate
- Economic marginalization drives more Darfurians to relocate
- Lack of safety and security drivers more Darfurians to relocate
- Surprisingly, other non-Arabic ethnicities tend less to relocate despite the rising waves of violence against them

## Recommendation

Root causes of conflict along Migratory routes identified in 2012 – farmers, pastoralists, IDPs and host communities identified in 2012- needs to be addressed

# Who supports the AKP?

## Mapping the Global Dimension of Policy Annual Conference

March 2016

### Introduction

The Justice & Development Party in Turkey (AKP) has dominated the municipal, parliamentary, and presidential elections in Turkey since its foundation in 2002 and up to date. Several works have attempted to explain this phenomenon, but studied several reasons unconnectedly and excluded other key explanatory factors. This study, therefore, looks at *who supports the AKP?* And, *what explains the support for AKP?*

The literature hypothesizes that voters' religiosity, ideology, economic optimism, employment, ethnicity, social class/income, education, gender, and age determine the voting behavior. Yet, in the Turkish scenario, it could be problematic and unclear to specify which of those have the key influence, and which are minor as well as what associations and interdependencies can be found among them.



Figure 1. The 2015 elections' results in Turkey showing the domination of the AKP geographically.

### Main Hypotheses

1. People who are religious tend to vote for the AKP Party
2. People who are conservative tend to vote for the AKP Party

### Other Hypotheses

1. People who have high economic optimism vote for AKP
2. Kurdish people less vote for the AKP Party
3. Women less vote for the AKP Party
4. People who are highly educated less vote for the AKP Party
5. Upper class people less vote for the AKP Party
6. Young people less vote for AKP Party
7. Young and well educated people less vote for the AKP Party

### Description of Data

• Data obtained from Worlds Views Survey website; a survey conducted between 2011 until 2015 and tackled peoples' views worldwide. The following variables have been identified, recoded and used as indicators in this study:

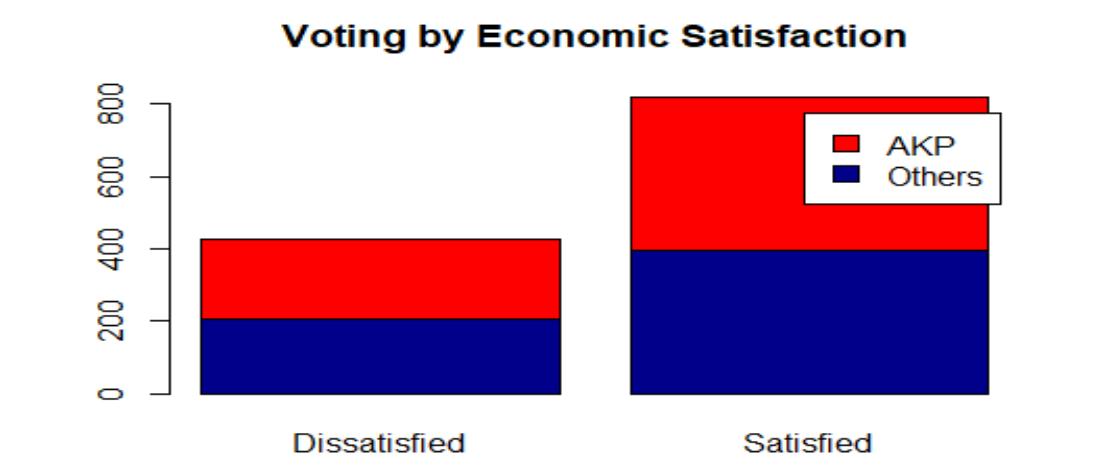
| Variable | Recoded     | Description       |
|----------|-------------|-------------------|
| V228     | AKPsupprot  | Vote for Who?     |
| V146     | Religiosity | Pray Frequency    |
| V95      | Ideology    | Ideology Scale    |
| V59      | EconomicOp  | Economic Satisf.  |
| V247     | Ethnicity   | Language @ home   |
| V240     | Gender      | Sex               |
| V229     | Employment  | Employment Status |
| V248     | Education   | Highest Education |
| V239     | Class       | Income            |
| V242     | Age         | Age               |

### Data Challenges

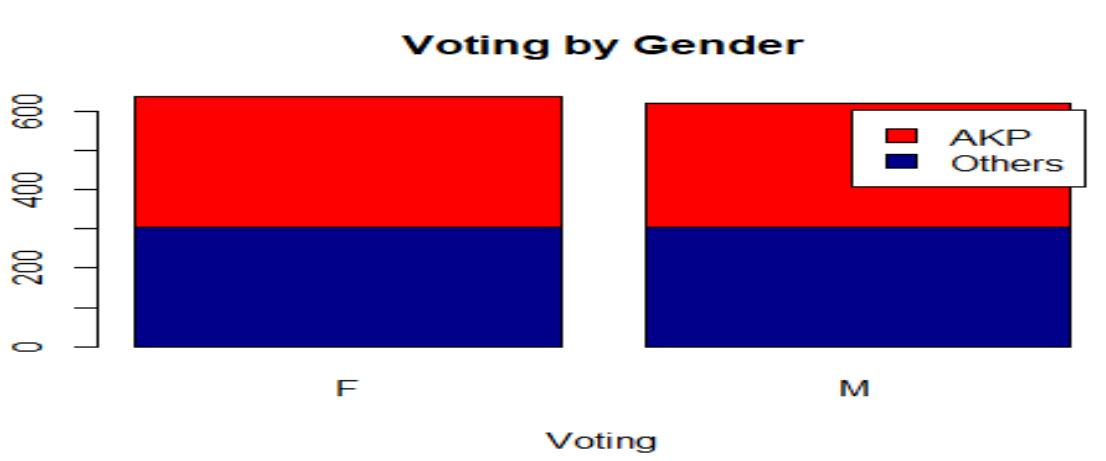
- Creating a subset for only Turkey of 1605 observations extracted from the main data warehouse of over 100 countries
- No question found about the respondents' ethnicity, so first language is used as direct indicator to ethnicity
- Missing values have been replaced either by the medians, and in some cases, mice computation code is used to compute replacement

### Visual Results

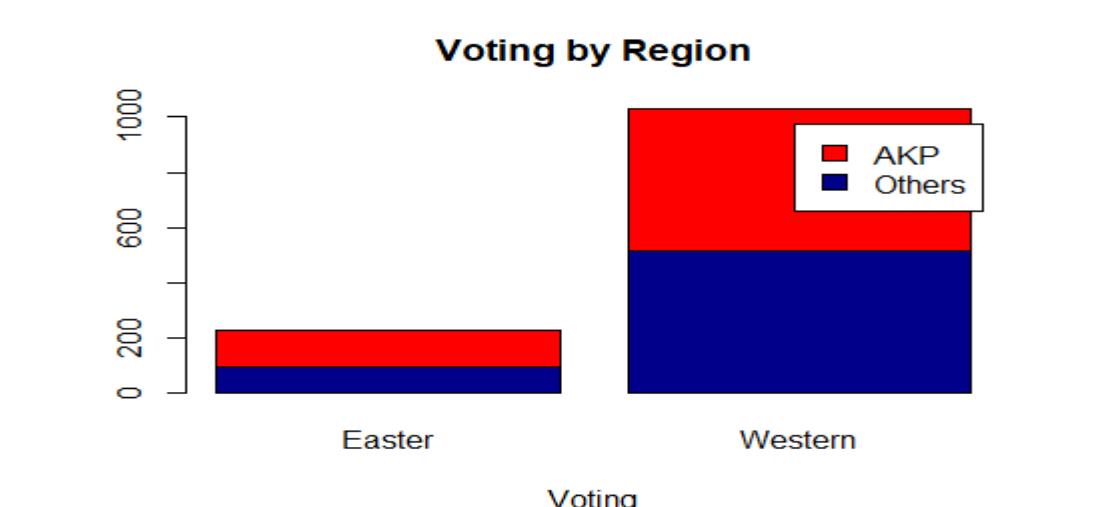
- Economic Satisfaction & Voting behavior



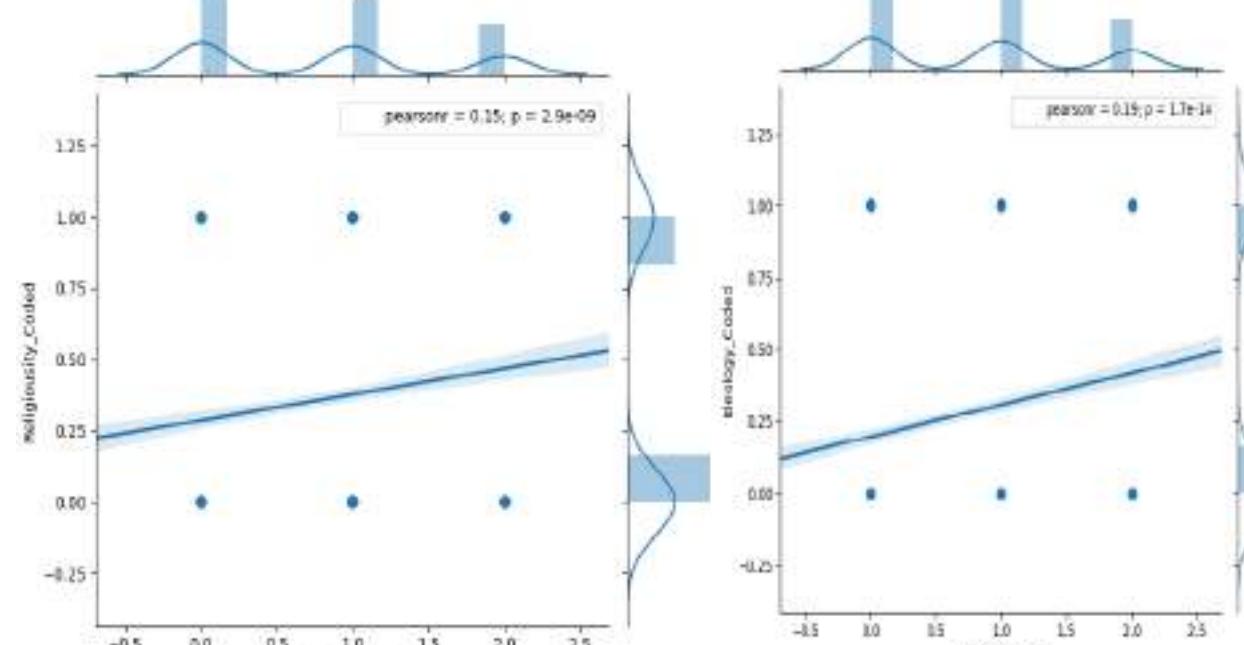
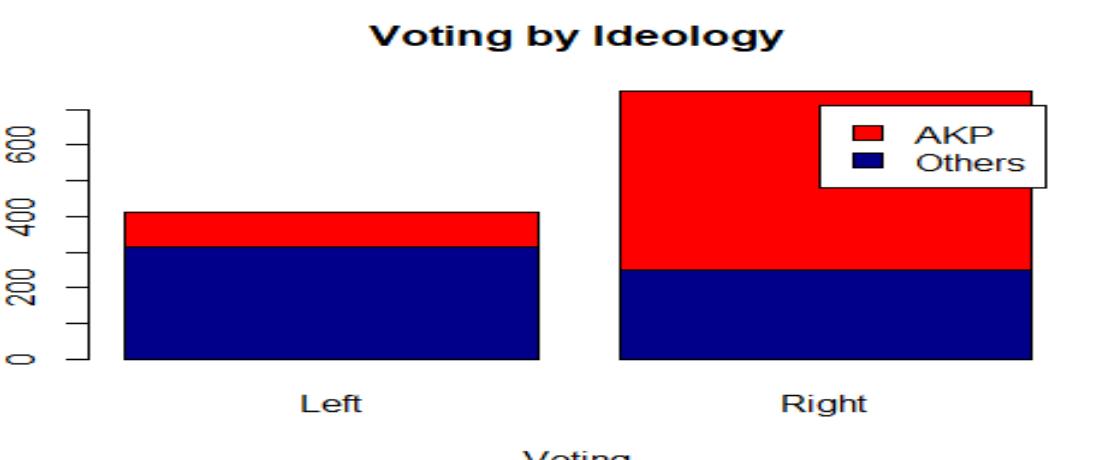
- Gender and Voting behavior



- Region and Voting behaviour



- Voting by Ideology



### Initial Logistic Model

| Generalized Linear Model Regression Results |                |                   |                  |                 |           |                |          |
|---------------------------------------------|----------------|-------------------|------------------|-----------------|-----------|----------------|----------|
| Dep. Variable:                              | Vote_AKP_Coded | No. Observations: | 1605             | Df Residuals:   | 1590      | Df Model:      | 14       |
| Model:                                      | GLM            | Link Function:    | logit            | Scale:          | 1.0000    | Method:        | IRLS     |
| Model Family:                               | Binomial       | Date:             | Thu, 04 Apr 2019 | Log-Likelihood: | nan       | Time:          | 13:00:04 |
|                                             |                | No. Iterations:   | 100              | Deviance:       | 4.59e+18  | Pearson chisq: | 4.59e+18 |
|                                             |                | Covariance Type:  | nonrobust        |                 |           |                |          |
| coef                                        | std err        | z                 | P> z             | [0.025          | [0.975]   |                |          |
| Intercept                                   | 5.607e+15      | 5.82e+06          | 9.63e+08         | 0.000           | 5.61e+15  | 5.61e+15       |          |
| C(Religiosity_Coded)[T.1]                   | 5.608e+14      | 3.7e+06           | 1.52e+08         | 0.000           | 5.61e+14  | 5.61e+14       |          |
| C(Economic_Satisfaction_Coded)[T.1]         | -1.292e+14     | 4.49e+06          | -2.88e+07        | 0.000           | -1.29e+14 | -1.29e+14      |          |
| C(Ideology_Coded)[T.1]                      | 2.346e+16      | 3.84e+06          | 6.11e+09         | 0.000           | 2.35e+16  | 2.35e+16       |          |
| C(Employment_Coded)[T.1]                    | 9.103e+14      | 4.3e+06           | 2.12e+08         | 0.000           | 9.1e+14   | 9.1e+14        |          |
| C(Social_Class_Coded)[T.1]                  | 6.424e+14      | 5e+06             | 1.28e+08         | 0.000           | 6.42e+14  | 6.42e+14       |          |
| C(Social_Class_Coded)[T.2]                  | 1.551e+14      | 4.37e+06          | 3.55e+07         | 0.000           | 1.55e+14  | 1.55e+14       |          |
| C(Income_Coded)[T.1]                        | -1.934e+14     | 3.64e+06          | -5.31e+07        | 0.000           | -1.93e+14 | -1.93e+14      |          |
| C(Income_Coded)[T.2]                        | 2.654e+14      | 8.32e+06          | 3.19e+07         | 0.000           | 2.65e+14  | 2.65e+14       |          |
| C(Sex_Coded + Age_Coded)[T.1]               | -2.252e+14     | 5.47e+06          | -4.12e+07        | 0.000           | -2.25e+14 | -2.25e+14      |          |
| C(Sex_Coded + Age_Coded)[T.2]               | 6.867e+13      | 5.39e+06          | 1.27e+07         | 0.000           | 6.87e+13  | 6.87e+13       |          |
| C(Sex_Coded + Age_Coded)[T.3]               | -4.644e+14     | 6.62e+06          | -7.02e+07        | 0.000           | -4.64e+14 | -4.64e+14      |          |
| C(Ethnicity_Coded)[T.1]                     | 5.762e+13      | 6.82e+06          | 8.45e+06         | 0.000           | 5.76e+13  | 5.76e+13       |          |
| C(Education_Coded)[T.1]                     | -4.996e+15     | 4.68e+06          | -1.07e+09        | 0.000           | -5e+15    | -5e+15         |          |
| C(Education_Coded)[T.2]                     | -5.792e+15     | 5.27e+06          | -1.1e+09         | 0.000           | -5.79e+15 | -5.79e+15      |          |

### Machine Learning Models

#### Logistic Regression

```
Out[327]: LogisticRegression(C=1.0, class_weight=None, dual=False, fit_intercept=True,
intercept_scaling=1, max_iter=100, multi_class='ovr', n_jobs=1,
penalty='l2', random_state=None, solver='lbfgs', tol=0.0001,
verbose=0, warm_start=False)

In [328]: regressor.score(X_test,y_test)### 0.55 KNN
Out[328]: 0.526774595267746
```

```
In [341]: clf = GridSearchCV(logistic, hyperparameters, cv=5, verbose=0)
```

```
In [342]: best_model = clf.fit(X_train, y_train.ravel())
```

```
In [343]: best_model.score(X_train,y_train.ravel())
Out[343]: 0.552369077367331
```

```
In [344]: print('Best Penalty:', best_model.best_estimator_.get_params()['penalty'])
Best Penalty: 12
```

```
In [345]: print('Best C:', best_model.best_estimator_.get_params()['C'])
Best C: 7.742636826811269
```

#### KNN

```
KNeighborsClassifier(algorithm='auto', leaf_size=30, metric='minkowski',
metric_params=None, n_jobs=1, n_neighbors=5, p=2,
weights='uniform')
```

```
In [208]: classifier.score(X_test,y_test)
Out[208]: 0.5024875621890548
```

```
GridSearchCV(cv=None, error_score='raise',
estimator=KNeighborsClassifier(algorithm='auto', leaf_size=30,
metric='minkowski',
metric_params=None, n_jobs=1, n_neighbors=5, p=2,
weights='uniform'), iid=True, n_jobs=1,
param_grid={'n_neighbors': [4, 5], 'leaf_size': [1, 3], 'algorithm':
'auto', 'kd_tree': [True], 'n_jobs': [-1], 'pre_dispatch': '2*n_jobs', 'refit': True, 'scoring': None, 'verbose': 0})

```

```
In [313]: model.score(X_train,y_train.ravel())
Out[313]: 0.6047381546013466
```

```
In [461]: model = GridSearchCV(knn, param_grid=parameters)
...: model.fit(X_train,y_train.ravel())
...: model.score(X_train,y_train.ravel())
Out[461]: 0.621778861180382
```

#### Random Forest

```
RandomForestClassifier(bootstrap=True, class_weight=None,
criterion='entropy',
max_depth=None, max_features='auto', max_leaf_nodes=None,
min_impurity_decrease=0.0, min_impurity_split=None,
min_samples_leaf=1, min_samples_split=2,
min_weight_fraction_leaf=0.0, n_estimators=10, n_jobs=1,
oob_score=False, random_state=0, verbose=0, warm_start=False)
```

```
In [357]: classifier.score(X_test,y_test)## score .64
Out[357]: 0.4875621890547267
```

### Conclusion

#### Means of AKPsupport (Which party would you vote for)



- The results of this study support the hypothesis that voters who are more religious and conservative in Turkey are more likely to vote for the AKP party.

- However, this study emphasizes other factors associated with the voting behavior and probably influence it in Turkey. It provides new insights about other categories that probably will not vote for the AKP despite their religious and ideological positions.

- Students and youth people are less to vote for the AKP Party. This is a potential window for future research.

- Housewives in Turkey are more likely to vote for the AKP, despite the part of literature that argue that women are less to vote with the conservative parties.

- Not only old retiring people are more likely to vote for the AKP, but also middle-age and middle class people with moderate or low educational qualifications.

- An excellent fit model of voters to support the AKP are people who are conservative, religious, over 30, middle class, and un-highly educated Turkish.

| Model               | Model Score | GridSearch Score |
|---------------------|-------------|------------------|
| Logistic Regression | 0.526       | 0.55             |
| KNN                 | 0.502       | 0.621            |
| Random Forest       | 0.487       | 0.613            |
| SVM                 | 0.525       | 0.592            |

# Who can be approved for home Loan?

## Metro Financial Services

### Dec 2018

#### Introduction

Metro Financial Services as a company which is in the area of providing home loans wants to lower its risk of default payments. Financial organization wants to know, which customers should be given the loans for buying the home. The home loans data set has the data of 990 loans with their loan status (approved vs. not). Certain features have been defined and could have an impact of the loan status. The aim is to build up a predictive model to find out which features of the applicants could affect the loan status and in which sense.

#### Hypotheses

##### Service Level Hypothesis

**Marital Status:** Single applicants are more able to have approvals as they request less loan amounts.  
**Education:** Applicants who are more educated are more able to get approval as they have higher incomes.  
**Self-employment:** Applicants who are self-employed are more able to get approval as they get higher income.  
**Co-application:** Applicants whose co-applicants are working and having income are more able to have loan approval than those who are sole-applicants.  
**Property Area:** Applicants who are living in urban areas are more able to get approval as their salaries are higher.  
**Credit History:** Applicants who have available credit history are more able to get approval than those who don't.  
**The Loan Amount:** Applicants who have high income apply for higher loan amounts.

##### Demographic Level Hypothesis

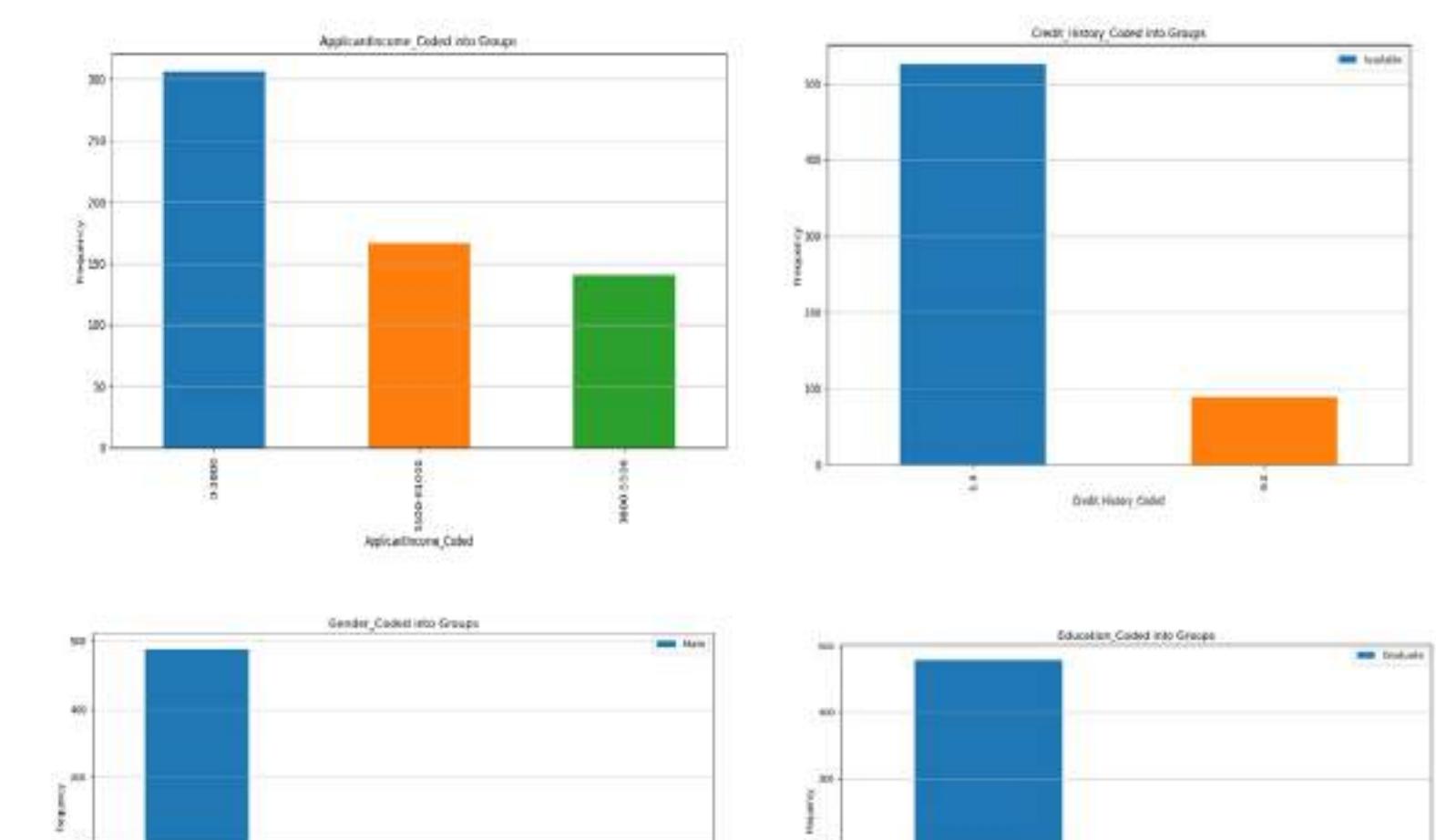
**Dependents:** Applicants who live in urban areas have fewer dependents than who live in semi-urban or rural areas.  
**Co-application:** Applicants who live in urban areas are more probable to have co-applicants than applicants in semi-urban or rural areas.  
**Credit History:** Applicants who live in rural areas are less probable to have available credit history than the ones in urban and semi-urban areas.  
**Marital Status:** Single applicants are more probably living in urban and semi-urban areas than rural areas.  
**Dependents:** Singles applicants have fewer dependents than married applicants.  
**Gender:** Males tend to be more the main applicants while the females are the co-applicants due to cultural reasons.  
**Gender:** Males are more able to have approved loans as they have higher income.  
**The Loan Amount:** Applicants who live in urban areas tend to apply for larger amounts than those living in semi-urban or rural.

#### Data Description & Challenges

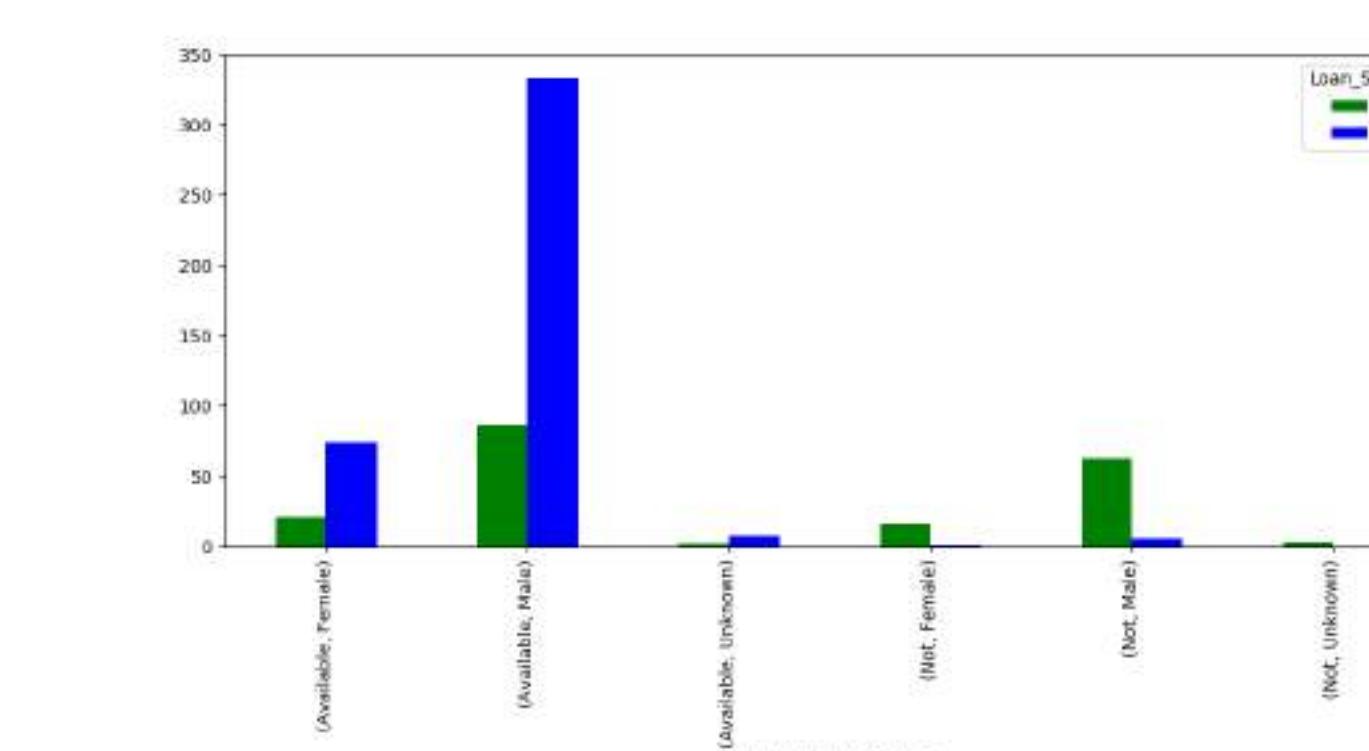
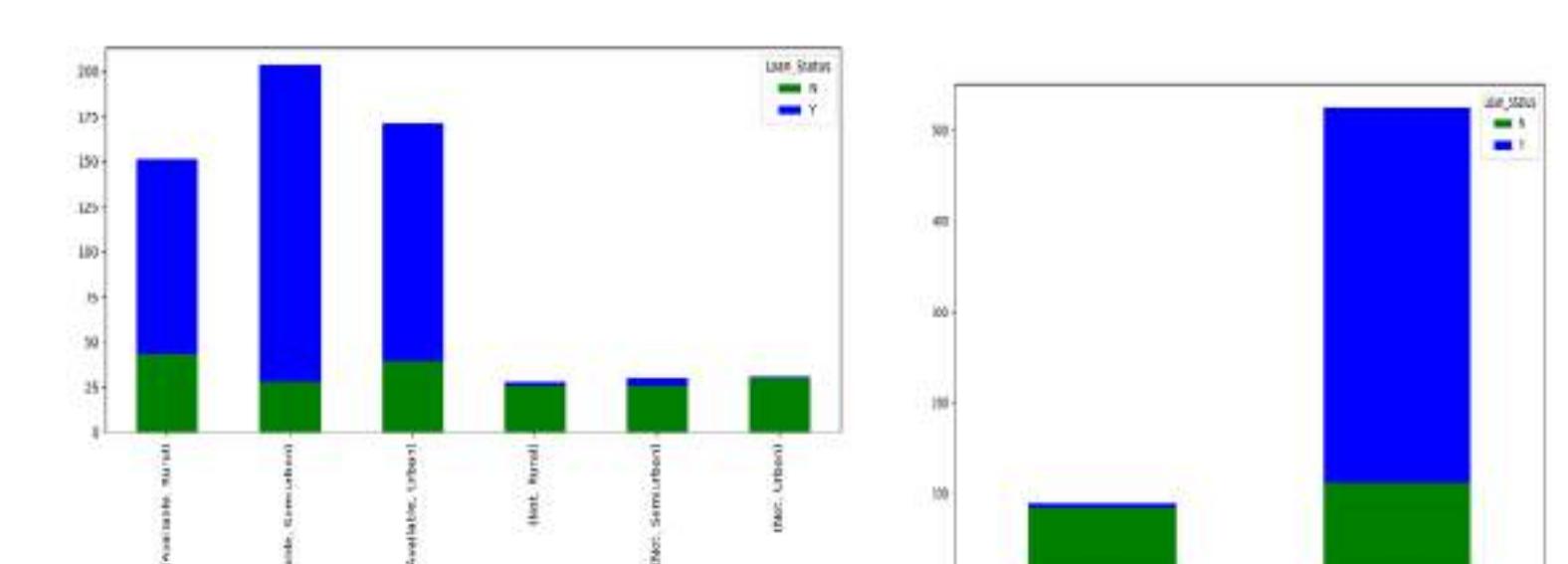
- Two Datasets: one with Loan\_Status, and one without.
- Total observations: 981 (Training: 614 vs. Test: 367)
- Number of original features: 13
- Number of total features after engineering: 28
- Missing Values: All features have missing values except: ApplicantIncome, CoapplicantIncome, Education, Loan\_ID, and Property\_Area.
- Unique Values: All categorical features have unique features range from 2 - 5 except Loan\_Amount\_Term which had 13 and recoded into 2 features (other vs. 360). Continuous features have been recoded into ranges
- All the missing values of the categorical features have been replaced by creating new category "unknown" – which believed to serve a better understanding and representation of population rather than using the mode or the median (clear biasness/ e.g. gender).

#### Data Insights & Visualization

##### Binning & Recoded Features

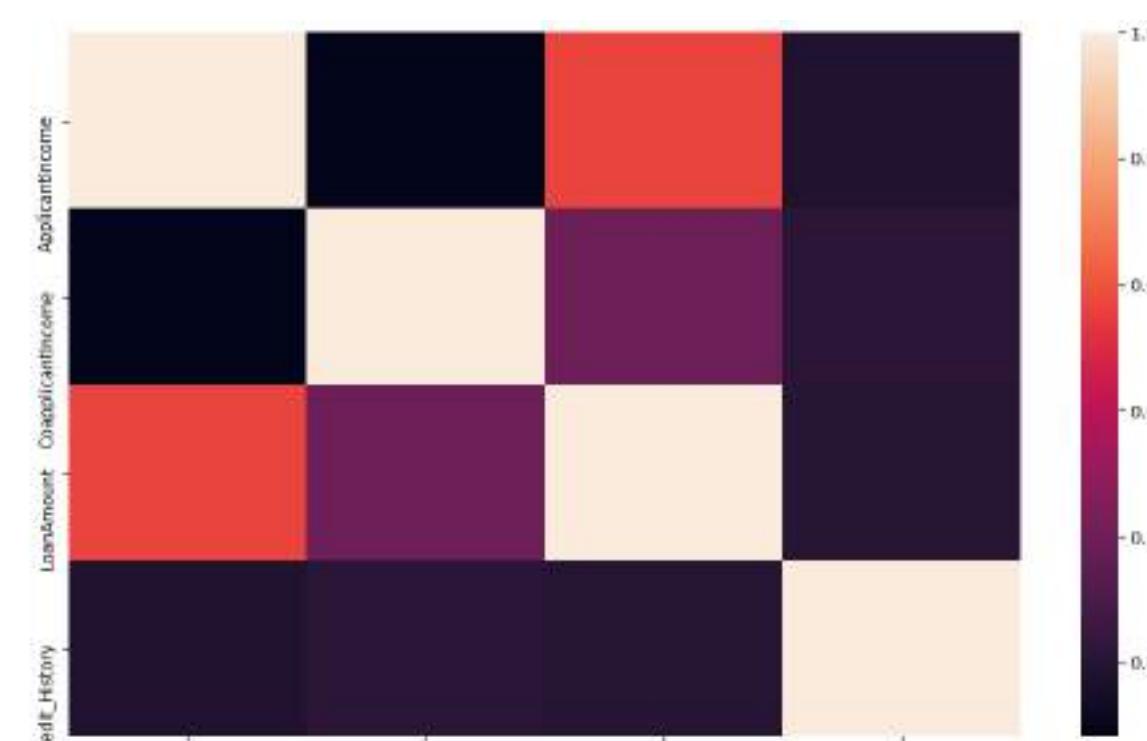


##### Cross tab visualization

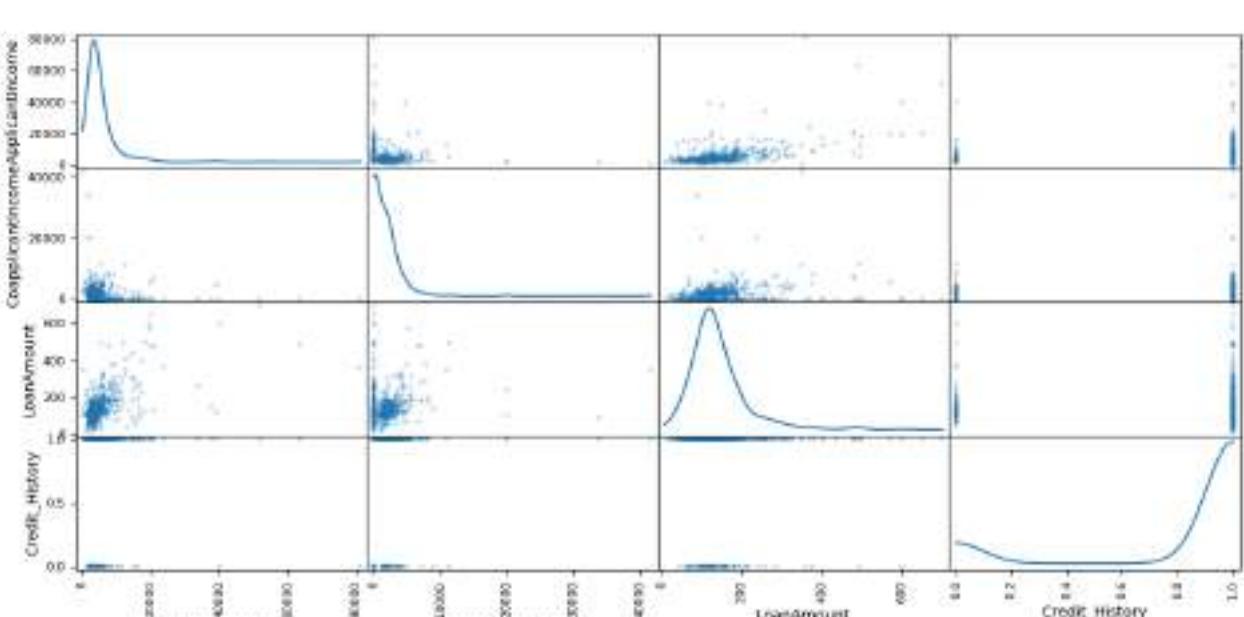


#### Statistical Insights

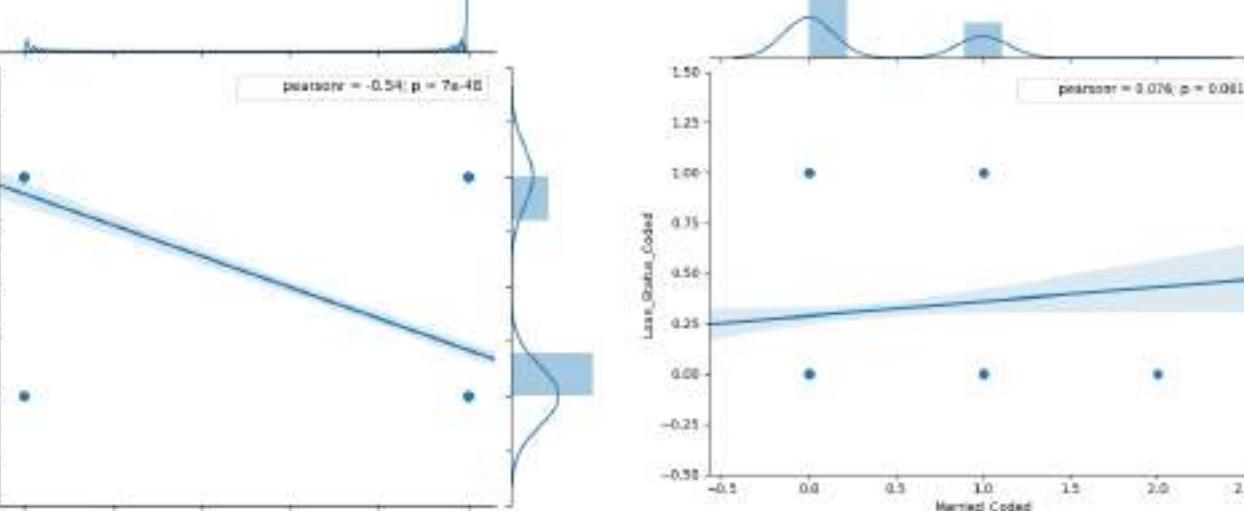
##### Heat Matrix



##### Distribution Matrix



##### Joint Plots



##### Baseline: Initial logit Model for estimating coefficient & significance

| Logit Regression Results        |                   |                   |           |                     |           |
|---------------------------------|-------------------|-------------------|-----------|---------------------|-----------|
| Dep. Variable:                  | Loan_Status_Coded | No. Observations: | 614       | df Residuals:       | 591       |
| Model:                          | Logit             | Method:           | MLE       | Df Model:           | 22        |
| Date:                           | Fri, 25 Jan 2019  | Time:             | 11:55:25  | Scalings R-squared: | 0.2243    |
| converged:                      | False             | Log Likelihood:   | -277.59   | AIC:                | 555.18    |
| LL-Null:                        |                   | LL-Null:          | -381.45   | BIC:                | 762.90    |
| LR p-value:                     |                   |                   | 3.495e-32 |                     |           |
| Intercept                       | 2.3864            | 0.572             | 4.174     | 0.000               | 1.266     |
| C(LoanAmount_Coded)[T.1]        | 0.3603            | 0.278             | 1.298     | 0.194               | -0.184    |
| C(LoanAmount_Coded)[T.2]        | 0.9771            | 0.489             | 1.999     | 0.046               | 0.019     |
| C(Total_Income_Coded)[T.1]      | -0.6916           | 0.357             | 1.687     | 0.092               | -1.308    |
| C(Total_Income_Coded)[T.2]      | -0.306            | 0.569             | -1.285    | 0.199               | 0.394     |
| C(ApplicantIncome_Coded)[T.1]   | -0.2318           | 0.103             | 0.164     | 0.445               | -0.363    |
| C(ApplicantIncome_Coded)[T.2]   | 0.3588            | 0.453             | 0.791     | 0.429               | -0.529    |
| C(CoapplicantIncome_Coded)[T.1] | -0.2894           | 0.309             | -0.935    | 0.350               | -0.896    |
| C(CoapplicantIncome_Coded)[T.2] | 0.2099            | 0.358             | 0.586     | 0.558               | -0.492    |
| C(Education_Coded)[T.1]         | 0.4061            | 0.265             | 1.535     | 0.125               | -0.112    |
| C(Education_Coded)[T.2]         | 0.0944            | 0.265             | 0.933     | 0.077               | -0.059    |
| C(Gender_Coded)[T.2]            | 0.3011            | 0.766             | 0.393     | 0.694               | 1.208     |
| C(Loan_Amount_Term_Coded)[T.1]  | 0.0997            | 0.299             | 0.334     | 0.738               | -0.485    |
| C(Married_Coded)[T.1]           | -0.5516           | 0.266             | 2.122     | 0.034               | 1.061     |
| C(Married_Coded)[T.2]           | -25.4568          | 4.29e+05          | -5.93e-05 | 1.000               | -8.41e+05 |
| C(Property_Area_Coded)[T.1]     | -0.8089           | 0.272             | -2.502    | 0.010               | -0.164    |
| C(Property_Area_Coded)[T.2]     | 0.1009            | 0.67              | 0.770     | 0.099               | 0.204     |
| C(Self_Employed_Coded)[T.1]     | 0.0005            | 0.331             | 0.001     | 0.999               | -0.649    |
| C(Self_Employed_Coded)[T.2]     | 0.2905            | 0.442             | 0.657     | 0.511               | -0.576    |
| C(Credit_History_Coded)[T.1.0]  | -3.9838           | 0.427             | -9.321    | 0.000               | -4.822    |
| C(Dependents_Coded)[T.1]        | 0.8739            | 0.259             | 0.285     | 0.776               | -0.434    |
| C(Dependents_Coded)[T.2]        | -0.2065           | 0.429             | -0.482    | 0.630               | -0.634    |
| C(Dependents_Coded)[T.3]        | -0.1191           | 0.843             | -0.141    | 0.888               | -1.772    |

#### Modeling & Findings

As the test set is the target to predict, 4 main classification models have been operated to choose best accuracy and performance: KNN, Logit, Random Forest, & Perceptron.

SVM & MLP have been also explored additionally.

##### Procedure:

The two datasets (train & test) were marked initial for later stages. (e.g. train['Trainsource']='train')

The two datasets were concatenated into one large dataset for preprocessing and feature engineering.

Later, the two datasets were separated.

Four objects were created based on the required features (predictors) to predict the target: X\_train, X\_test, y\_train, y\_test.

As the target is (y\_test), each model was run twice. The first time is to predict the y\_test and use it as true y\_test in the second time for performance measuring.

Gridsearch and hyperparameter were also ran eventually for performance improvement.

#### Key Findings

The loan amount requested affects positively on the loan approval based on the coefficient & level of significance.

Marriage & Credit history also affects positively on loan approvals and have significance.

Based on coding, large amount of request loan is more probable to be approved. Also positive & significant.

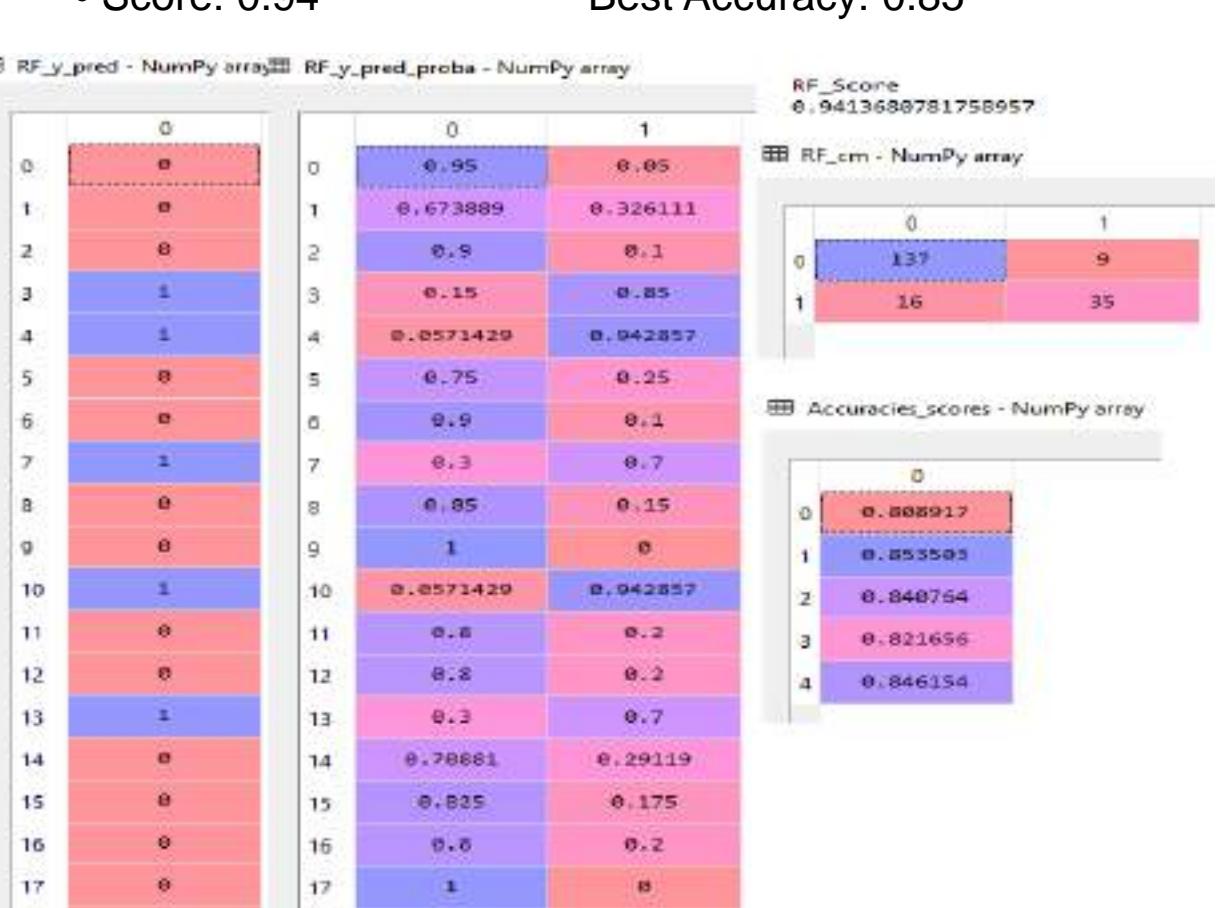
People who are living in urban and semi-urban areas are more to be approved. (Significant & positive)

Unavailable credit history affects negatively on loan approval. (significant & negative)

The best model performance was for Random Forest:

Score: 0.94

Best Accuracy: 0.85



#### Models Results

| Comparison of the ML Models Results |            |       |          |              |       |
|-------------------------------------|------------|-------|----------|--------------|-------|
| ML Algorithm                        | Accuracy % | Score | Approved | Not Approved | Total |
| KNN                                 | 79%        | 0.81  | 320      | 47           | 367   |
| Logit                               | 83%        | 0.83  | 308      | 59           | 367   |
| Perceptron                          | 81%        | 0.78  | 212      | 155          | 367   |
| Random Forest (RF)                  | 85%        | 0.94  | 274      | 93           | 367   |



**EXECUTIVE SUMMARY OF THE EIGHTH MEETING  
OF THE IMPLEMENTATION FOLLOW-UP COMMISSION (IFC)  
OF THE DOHA DOCUMENT FOR PEACE IN DARFUR (DDPD)**

28 April 2014

---

28 April 2014, El Fasher

---

1. The eighth meeting of the Implementation Follow-up Commission of the Doha Document for Peace in Darfur (DDPD) was held on 28 April 2014, in El Fasher, Sudan. The meeting was chaired by H.E. Ahmed bin Abdullah Al Mahmoud, Deputy Prime Minister and Minister of State for the Council of Ministers Affairs, and attended by representatives of the former Joint Chief Mediator, African Union, European Union, the League of Arab States, Organization of Islamic States, Canada, Chad, China, Egypt, France, the Russian Federation, the United Kingdom, the United States, the Government of the Sudan (GoS), the Liberation and Justice Movement (LJM), the Justice and Equality Movement-Sudan (JEM –Sudan) and UNAMID.
2. The meeting discussed progress made and the challenges faced in the implementation of the Doha Document since the last meeting held met on 16 December 2013 in El Fasher. The meeting took note of the continued commitment and efforts of the Government of Sudan, the Liberation and Justice Movement (LJM) and the JEM-Sudan to the implementation of the Doha Document.
3. The Chair welcomed the initiative of national dialogue launched by President Omer al-Bashir as bases to reach consensus on national issues and the invitation extended to the armed movements to participate in this process. The Chair recognized the tireless efforts of President Idriss Déby to bring peace and stability to Darfur by convening the first and second Um Jaras Conferences. He called on the parties to immediately cease hostilities in order to bring about peace and allow for the timely implementation of development initiatives for the people of Darfur.
4. The Chair noted Qatar's continued commitment to bring the dividends of the DDPD to the people of Darfur by concurrently supporting with early recovery and reconstruction initiatives. In this regard, the Chair took note of the meeting of the Council of Donor held in El Fasher on 27 April and call on peace partners to join the recovery effort and underscored, among others, the State of Qatar's efforts to facilitate voluntary returns by reconstructing five model villages, which will be inaugurated soon.
5. The meeting received a brief from the JSR/JCM on DDPD implementation and the situation in Darfur. The JSR/JCM highlighted the upsurge of violence in many parts of Darfur and reported on the progress made in the implementation of the DDPD, particularly steps taken

by the parties towards implementing the security arrangements, the signing of 315 contracts for Foundational and Short-term Activities (FaST) and the conduct of several workshops in Darfur states and Khartoum as well as the endorsement of a 17 – member implementation committee comprising of a cross section of members of Darfur representations/civil society by the Darfur Internal Dialogue and Consultation (DIDC) Facilitators.

6. The JSR/JCM also provided a brief on his efforts to bring the non-signatory movements on board the peace process, including meetings held with Abdul Wahid Nur, Minni Arkow Minawi and Gibril Ibrahim on 10 February in Kampala; participation in second Um Jaras between 26 to 29 March and consultations with President Yoweri Museveni of Uganda, President Idris Déby of Chad, the Foreign Ministers of Burkina Faso, Ethiopia, Rwanda and Uganda, the Executive Secretary of the Inter-Governmental Authority for Development (IGAD) and a number of Special Envoys for Darfur and Sudan, to garner regional support for the peace process.

7. The JSR/JCM updated the meeting on the interaction he facilitated between the leaders of two of the armed movements, Minni Minawi and Gibril Ibrahim, the African Union Commission Chairperson, Nkosazana Dlamini Zuma, and the African Union Commissioner for Peace and Security, Smail Chergui, in Addis Ababa, on 8 March. On the same day, JSR/JCM also facilitated a meeting with the Chairperson of the African Union High-level Implementation Panel, Thabo Mbeki, with the armed groups to explore ways to synchronize the two mediation efforts in support of the national dialogue.

8. The JSR/JCM noted that the recent call for national dialogue by President Al Bashir presents a window of opportunity to address many of the entrenched problems of Darfur and Sudan as a whole and therefore called on the members of the IFC to explore pragmatic ways as to how the DDPD can feed into the proposed national dialogue.

9. The Chairman of Darfur Regional Authority (DRA), Dr. El-Tijani Seisi, provided an update on progress in the implementation of the DDPD notably: the signing of contracts for 350 projects development projects; the establishment of the Special Court in Darfur States of Darfur and progress in implementing the security arrangements; the conduct of workshops in support of social peace in Darfur State; and plans to hold a comprehensive conference for the whole region following these workshops.

10. On voluntary returns, the Chairman shared there are returned activities in 147 areas. To sustain these returns, the Chairperson proposed the institution of community policing, recruiting such officers from among the ‘sons and daughters’ of returned population/communities to promote not only confidence, but also a sense of ownership of their sanctuary needs. To this

end, he thanked the Qatars' for the model villages under construction with full services in support of Voluntary Returns.

11. The Chairperson decried the recent deterioration of the security situation in pockets of Darfur noting that the non-signatory movements are responsible for this in some parts of North Darfur, which coupled with the activities of the Rapid Support Forces (RSF) have resulted in loss of any lives and displacement. He noted that to stabilize the situation, the DRA among others held meetings in Khartoum as well as visited the affected areas to provide support, coordination with State Security Committee and HAC, to the people in need.

12. He therefore called on non-signatory movements to adhere to the outcomes of the Um Jaras mechanism where some of them pledged not to attack anybody or civilians and called on them to join the peace process. He reiterated LJM's support for the DDPD despite the challenges and found the National Dialogue Darfuris sole choice for peace, and called on partners/international community to exert pressure on non-signatory movements to join the peace process.

13. The Head of the Darfur Peace Follow-up Office (DPFO) expressed appreciation to the IFC, and in particular the efforts of the States of Qatar and Chad to facilitate the peace process in Darfur. The DPFO briefed on the implementation of the DDPD which he noted is on course and noted that some provisions, such as construction and project related matters needed time and sustained support to be concluded. He also underscored progress on the security arrangement with JEM-Sudan, noting that the process is advancing in good spirit. He recalled the recent Presidential Decree that lead to the release of some JEM-Sudan prisoners are part of the progress made. The DPFO also provided a brief on the decision of the government to create a committee in order to implement the outcome of the Um Jaras conferences, in particular disbarment and security arrangement in the sub-region.

14. The DPFO called on UNAMID to coordinate better and utilize the tripartite mechanism on the DDPD so that DDPD implementation and reports are better coordinated. The DPFO reiterated the government's commitment to enhance security and facilitate access to UNAMID and humanitarian partners as well as consider the cessation of hostilities in the context of a comprehensive peace process. He also welcomed the support received on national dialogue and noted that the DDPD should feed into the proposed national dialogue and finally underscored that the national dialogue is an internal sovereign Sudan matter.

15. The LJM representative expressed concern on the security situation in Darfur. The representative underscored LJM's commitment to the DDPD and called on the international community to support the DDPD, in order not to start from the beginning. He noted progress made in the implementation of security arrangements and request the government to release

remaining LJM prisoners. The representative expressed LJM's support to Um Jaras process and appreciation to the IFC.

16. The JEM/Sudan representative reiterated his movement's commitment to the DDPD as the only forum for realizing peace in Darfur and called on the international community to consistently support its implementation. On the Final Security Arrangements (FSA), he noted that the verification of their combatants has started and expected to be concluded by May, 2015. He called on GoS to release and pardon their prisoners as well as pledged allegiance to the outcomes of the Um Jaras Conferences. He expressed concern with lack of progress on power sharing and its relationship with the DRA and thus appeal to GoS to review the situation.

17. The African Union (AU) representative noted AU's firm support for the DDPD as a framework for peace in Darfur and welcomes the national dialogue initiative as a good foundation to peace in Sudan. In this regard, the AU congratulates the government for its commitment to seek a comprehensive peace in Sudan. The AU representative highlighted serious concerns, namely: (1) recent clashes between the government and armed movements and tribal clashes is unacceptable; (2) that the use of militias is unacceptable; (3) highlighted the importance of implementing signed agreements and underscored the need for mutual trust and respect between the parties. The AU representative emphasized its support and desire for a strong and prosperous Sudan.

18. The Foreign Minister of Chad reported on the Um Jaras conference as an initiative that support grassroots aspiration to seek and live in peace. He welcomed the national dialogue initiative and called on all armed groups to join the process. The Minister noted that the SLA/MM and JEM leaders were briefed on the outcome of Um Jaras conferences and called on the international community to mount the necessary pressure on all armed movements to join the peace process and the national dialogue initiative. The Minister expressed concern on the appearance of lack of coordination and cooperation between the Government of the Sudan and UNAMID, stressing that the relationship between the government and UNAMID is critically important, and called on both to close any gaps that may exist. The Minister called on the government to clarify the status of the Rapid Support Forces (RSF) in order facilitate a sound understanding of the situation.

19. The representative Organization of Islamic Conference (OIC) reiterated support for the DDPD as a sound base to consolidate the peace process in Darfur. He expressed concern on the recent upsurge in the conflict in Darfur and called on all to cease hostilities. The IOC welcomed the national dialogue initiative and appealed to all stakeholders to join the process.

20. The League of Arab States (LAS) noted the challenges in the pace of the implementation of the DDPD and noted that the UNAMID report disproportionately moves the burden of

challenges on the government. He held that while security challenges attributed to the RSF were reported, the activities of the armed movements have not been adequately taken into account. He joined the Foreign Minister of Chad in seeking clarifications on the status of the RSF and also called on closer cooperation and coordination between the government and UNAMID. The representative noted the positive developments particularly the Um Jaras Conference and proposed national dialogue initiatives, and therefore called on the international community to encourage all parties and armed movements to join the process. The representative supported the position of the DFPO that the national dialogue is first, an internal issue.

21. The representative of Canada expressed appreciates to the State of Qatar and the personal efforts of the DPM and UNAMID in the implementation of its mandate. He noted that as members of the IFC, it is important to underscore the primary role of the IFC in reviewing the implementation of the DDPD. Canada is concerned with the current security situation in Darfur and strongly condemns all violence against civilians. Canada will like to see the disbarment of militias as stipulated in the DDPD and in this regard, Canada also shares the concerns of the UN Secretary General as reported in the last report to the UNSC. He noted that Canada is equally concerned and condemns attacks by all actors against civilians. He recalled that Canada has long been of the view that the situation in Sudan cannot be solved in isolation of the rest of Sudan. Considering the specific needs of Darfur, Canada views some provisions of the DDPD as useful in the attempt to address Sudan's problems in a comprehensive ways. The representative of Canada noted that the people of Darfur have suffered long enough and do not deserve continuing violence. He concluded by reiterating that Canada looks forward to seeing peace and stability flourish in Darfur and Sudan.

22. The representative of the former JCM reiterated support for the DDPD and urged the IFC members to facilitate the implementation of the DDPD. The representative also called on non-signatories to join the peace process in order to consolidate the human security project in Darfur.

23. The EU representative noted that there has been progress in the implementation of the DDPD, but underscored that more remains to be implemented. The representative called on the parties to make concrete progress in implementing measures that reach the grassroots and highlighted the need for progress to be recorded in the established DDPD organs and committees. He also stressed that the proposed national dialogue is a unique opportunity for all of Sudan and called on the government to create conducive environment for all to participant as well as join the process in good faith. He observed that the initiative is an internal issue, but some partners such as President Thabo Mbeki of the AUHIP and the JSR/JCM have a role within their already mandated roles to support the process.

24. The US representative thanked the State of Qatar for its continuous commitment to peace in Darfur and for its substantial financial support, and the UNAMID JSR/JCM for his

engagements in pursuit of peace in Darfur. He expressed concerns about the deteriorating security situation in Darfur due to the activities of the GoS and affiliated militias such as the RSF. Indiscriminate attacks against civilians and their property, aerial bombing of civilians by government forces as well as the activities of armed movements all continue to exacerbate the fragile security situation and therefore called on the DRA and GoS to prioritize security in Darfur as they seek to implement the recent agreement on final security arrangements.

25. He noted that while some of the provisions of the DDPD are viable enough to support peace and security, and contribute to early recovery and future development of Darfur if fully implemented, the DDPD does not adequately address the inter-tribal aspects of the conflict which has only grown worse. Going forward, he suggested that the broader issues of governance, rule of law, human rights, and security sector reforms be resolved within an inclusive and participatory national political dialogue. He extended United States' readiness to support opportunities that will improve the livelihoods of Darfuris and bring peace.

26. The representative of France, in concurring with other commission members, echoed a military solution is not an option for resolving the conflict in Darfur adding, the number of violent conflicts and displaced have increased; and the conflict in Darfur is not happening in a vacuum as there are other conflicts such as the Blue Nile, South Kordofan and South Sudan with implications for neighboring countries such as Chad and CAR. He reiterated France's commitment to the DDPD, stating it should be the basis for reaching a peaceful settlement in Darfur as stakeholders continue to explore a global approach aimed at resolving all the conflicts in Sudan as France is also in favor of a global solution to the Sudan conflicts.

27. United Kingdom (UK) expressed concern about the security situation and the prospects for peace in Darfur, highlighting that a quarter of Darfuris have been displaced as a result of the activities of the armed conflict by pro-GoS RSF and the armed movements and humanitarian access continues to be hindered. He regretted the expulsion of reputable humanitarian organizations such as the International Red Cross Red Crescent from the region, and cautioned if the situation continues, the viability of the DDPD would come under threat. He urged GoS in particular, and the parties in general to commit to facilitating humanitarian access and enable the humanitarian community to reach affected people. He also reiterated UK's strong commitment to the people of Darfur and the DDPD, as it finds it to be a good framework for peace and stability in Darfur.

28. The representative of Egypt expressed concerns on the deteriorating security situation and the resulting implication on the humanitarian situation and socio-economic development in the Darfur. He welcomed progress made in the DDPD, particularly the 315 projects as reported by the DRA. He informs the commission on Egypt's continuous commitment to provision of

scholarships in the area of Agriculture and water, with plans to build a Health Center for people of Darfur.

**El Fasher, 28 April 2014**

## **The Rise of AKP Party in Turkey: Key Debates and A Hypothesis**

By: Ramzi Abdelrahman

Draft Paper

## Table of Contents

|                                                              |    |
|--------------------------------------------------------------|----|
| <b>Research Question</b> .....                               | 3  |
| <b>Why AKP?</b> .....                                        | 3  |
| <b>Methodology</b> .....                                     | 4  |
| <b>Review of Key Debates</b> .....                           | 8  |
| <b>Islam's Ethnoreligious Identity &amp; the State</b> ..... | 13 |
| <b>A Decade of Key Events</b> .....                          | 15 |
| <b>The Appeal of Islamic Identity</b> .....                  | 17 |
| <b>Ethnic Underbidding</b> .....                             | 19 |
| <b>Conclusion: Ideological Manipulation</b> .....            | 22 |
| <b>Bibliography</b> .....                                    | 25 |

## **Research Question**

Since its formation in 2001, it is widely debated that the Justice and Equality Party, known as (AKP), has pillared its formation on a principle of accepting the secular nature of the Turkish State, and rejecting any ambition to set or incorporate the Islamic law, *Sharia*, with the Turkish constitution (Champion & Bradley, 2011). Different theories and explanations have been elaborated to engage upon debates about the reasons of its prominent electoral success. Though, it was not clear how the AKP manipulates this principle for electoral gains and to what extent could this principle become explicit or implicit. As shown in this paper, some have highlighted the role of AKP's ethnic identity in creating its electoral success; others have argued that it is because of the AKP's political performance and economic agenda; another group has linked this success to the public dissatisfaction over other parties' performance. Indeed, there are many explanations and theories about its success, but neither can be seen to provide the conclusive and supreme explanation.

As part of this debate and in order to understand this unique phenomenon, this paper questions *What explains the electoral success of the AKP?* In other words, *how does the AKP Party operate its ethnoreligious identity to achieve better political gains?* To elaborate a better understanding of this phenomenon, other sub-questions have been raised to assist in exploring the causal linkages between those variables. To understand how the AKP operates its ethnic identity, the paper argues that it is important to understand what constitutes an Islamic identity, how this Islamic identity interacts with the political platform of the AKP, and can the Islamic identity, solely, explains the AKP's electoral viability? There is also an additional need to explore how does the AKP Governments deal with its liberal and secular counterparts, and how does its political platform affect the political gains?

## **Why AKP?**

The analysis of the AKP is a single case study, intended to explore what can explain the distinguished and consecutive success of the AKP party. The purpose is to contribute to the literature of why ethnic parties emerge, how do they implement their ethnic strategies,

and what constitutes their electoral strategies. A single case study, therefore, is an appropriate design to highlight within-case key conditions which can be used for further inquiries and comparisons.

Though, much of critique has been deliberated around the inappropriateness of selection based on the dependant variable as it could bias results toward finding no relationship (Geddes, 1990: 133), or underestimate the strength of the relationship (Collier and Mahoney, 1996: 66). However, others see it useful to explore single-case studies to shed light on important conditions that may help in larger comparative research projects. Dion (1998) and Flyvberg (2006), for instance, argue that it can be admissible and justifiable to provide an analysis of small number of cases based on a dependant variable in order to evaluate necessary conditions in small-n environment (Dion, 1998: 127).

Thus, the case of AKP electoral success was selected purposively based on the independent explanatory variable of its ethnic identity. Though, as the scope of this research is limited, it is difficult to investigate a broader contrast-space or negative cases to use a proper frame of comparison. The purpose of exploring the reasons of AKP's electoral success is not to understand all sufficient conditions of an ethnic party to succeed, but the main necessary conditions that contribute to such success. This paper calls for more investigation over its hypothesis to fortify its findings or falsify it through more qualitative statistical analysis of primary data sets and via comparative analysis of large-n cases to provide more rigorous generalizations.

## Methodology

This paper is an explanatory study aimed at explaining what validates some assumptions about what explains the success of the AKP by investigating assertions of causality and the theoretical explanations surrounding the success of the AKP. A hypothesis, thus, has been assumed to correspond to the research questions. **The AKP party probably achieves better political gains by implicitly focusing on the appeal of its ethnoreligious identity, and explicitly denouncing it.** The several elections won by the AKP are key critical indicators used to investigate this hypothesis. Those indicators are pertaining to the political performance of AKP, the ethnic appeal influence over the mass,

and the relationship between Islam and state in Turkey. In so doing, a simple empirical investigation is needed to examine the literature of the relationship between Islamic identity and democracy, as well as a content analysis for press statements of party leaders that might appeal to voters. Also, some media texts were examined to see if there is any evidence of implicit or explicit ethnic outbidding or underbidding strategy executed by the AKP between 2002 and 2016.

The study, thereunto, adopts a qualitative historical analysis to answer the research questions. The texts used for this analysis refer to digital books, essays, discussions, newspaper headlines and articles, speeches, conversations, or any occurrence of communicative language to produce contextualized interpretations. This aims at capturing contingent logic observed in the ethnic bedding of the AKP party by focusing on the key themes that formulates its ethnic identity. The study starts by stating its research question followed by a conceptual framework and how the concepts are going to be operationalized. Further investigation of the concepts in the literature is deliberated in order to avoid any possible concept stretching or unclear terminology. The purpose of the conceptualization phase is to translate the concepts into empirically observable variables throughout a set of assumptions of interrelated concepts and causal relations derived accordingly to constitute an explanation of why and how the AKP uses its ethnic identity.

In the following stages, the study proposes a hypothesis to tackle the question of this research. However, due to the limitation of time and resources, the hypothesis serves as an explanatory tool of the correlation between the variables, but testing it needs further primary data and manageable time that is not within the scope of this paper. Though, certain measures and indicators can be elaborated to test how the independent variable is correlated with the dependent variable. The best of them can be elaborated through a content analysis. Press statements, official comments and even informal conversations of key leader of the AKP “Erdogan” can be an excellent testing indicator to the validity of this hypothesis. As some of those conversations and statements have been analyzed in this paper, more empirical evidence can support or defy the hypothesis of this paper through simple statistical analysis of the key components of the hypothesis.

The conceptual framework, in this paper, has a key role in removing any lack of clarity of the key concepts operationalized to serve as explanatory tools and measurements. Clear conceptualization, thus, is very critical as it provides strategic definition of ideas or concepts to design hypothetical framework and theoretical assumption. The purpose of designing a strong conceptualization is to provide empirical inclusions or results based on how the concepts incorporate perceptions about former experience, attitudes, cognitions, expectations, and behaviors.

The exploration of the concept of identity in the literature can be challenging. Different scholars have produced different perceptions and conceptions about what is identity? Yet, the most common and credited definitions are provided by Horowitz and Chandra. Horowitz (1985) defines it as a collection of attributes under one umbrella such as tribe and nationality, in which this definition has been credited by other scholars such as Varshney (2002), Chandra (2004), and Posner (2005) (Chandra, 2006: 397). Chandra (2006), on the other hand, defines it as “any social category in which an individual is eligible to be a member” in which it is determined by “descent-based attributes” associated or believed to be associated with (Chandra, 2006: 400).

Ethnic identity relies, therefore on attributes associated with identity and restricted by being part of direct family or group association, part of a section of a country or a place, and part of qualifying attributes of language, religion, origins, tribe or any other relevant attributes (Chandra, 2006: 400). In this regard, Horowitz (1985) proposes that ethnic parties are driven by the incompatibility of the interests of the groups, and Hale (2008) argues that ethnic identification is conceptually prior to manifest interests, actions, and actors (Zuber, 2011).

Ethnic bidding is another conceptual challenge that this study might encounter thoroughly. Christina Zuber (2013) has reviewed the literature of ethnic bedding and argues that Coakley's (2008) definitions are sharp and more rigorous, in which those definitions constitute this paper conceptualization of what is ethnic bedding. Ethnic bedding is formed in two ways: “outbidding”, an electoral strategy whereas the party either emphasizes the ethnic cleavage solely and manifests itself as the best defender of bloc interests, and “underbidding”, whereas the party emphasizes a middle ground and

moderate approach” (Zuber, 2011: 759). Ethnic bedding can also be static where the party does not implement any outbidding or underbedding.

Though, it is important to conceptualize what is ethnic identity to operationalize it in the empirical analysis of this paper. Webber, Fearon and Laitin, as well as Hutchinson and Smith have defined the term of ethnic identity as a one unit of analysis, and agree that the descent and hereditary heritage attribute constitute the common ground of these definitions (Chandra, 2006: 403). In terms of ethnic appeal, Chandra (2005) argues that ethnic parties try appeal to the mass by portraying itself as the interests’ hero of one ethnic group, in which the key of this portray is to **exclude** the other (Zuber, 2011: 758-60).

Based on this theoretical basis, an Islamic identity is conceptualized, at minimalist definition in this paper, as the belief of obtaining an active membership of an inherited culture that stems from the Islamic religion, requiring to downplay any other attributes (e.g. race and tribe) and overvaluing the religion membership. However, this definition does not propose that the Islamic identity as an ethnic identity can be more or less powerful than other identities. It can be observable that its appeal is used strongly in situations where there is a need for unity to encounter an opponent or to constitute a gathering-ground if huge differences are found to be unity obstacles. For example, Muslims in Pakistan in the past century have used the Islamic identity to reach independence from India despite the huge tribal and linguistic differences in Pakistan. The Arabs, on the other hand, who used to live in the Arab peninsula used to have severe tribal wars before they united by their religion’s identity.

Yet, Islamic identity can be seen as a conflicting identity with other principles such as nation-states and nationalism because it exceeds the geographic boundaries of territory or a state. The principle of brotherhood is a very crucial key to understand the appeal of this identity. The practices of Quran and the Prophet “Mohammad” requires any Muslim to consider any other Muslim as a brother as a religious obligation, regretting any other possible ethnic differences. Thus, as more people become religious, as more they denounce their differences and unite within one identity. Hereof, many politicians and parties have spotted the potential of recruiting this identity in order to achieve better

political gains. The concept of Islamization, hence, is a key process in which it entails adding religious label or justification on any political action or strategy to gain more mass and support, and to decrease any potential opposition. Nevertheless, it can be also argued that it is a dangerous process that entails providing extreme justifications or very greedy political ambitions.

### **Review of Key Debates**

The literature of this study stems from a major debate about the compatibility of Islam and democracy. The AKP success has been linked, criticized, assessed, and explained based on the grounds of two camps: one that sees that Islam and Islamic identity is compatible with modern forms of democracy, and another that sees it as incompatible. This part of the study reviews how the scholars may perceive the relationship between Islamic identity and democracy, and how explanations of the success of AKP has been developed and linked to such debate.

In recent studies on Islam and politics, this topic has polarized scholarly literature into two streams. The first strand is what can be called the incompatibility school. Scholars in this stream perceive Islam and democracy as two different and opposing ideas and thus cannot coexist in one polity. Their arguments indicate skepticism of the possibility of the two ideas to converge or coexist. There are many prominent political theorists and historians that fall into this camp including Huntington, 1993, 1996; Lewis, 1990, 1993, 2002; and Kedouri, 1992, to name a few. These scholars basically perceive democracy to be a distinctively Western idea that is therefore impossible to apply to an Islamic community (Voll, 2007).

The second stream is what can be called the compatibility school. Scholars in this group argue for possible coexistence and convergence between Islam and democracy. This stream bases their arguments on the notion that Islam contains many elements that make it compatible to support democracy. This list of scholars includes Esposito and Voll, 1996; Esposito, 2002; Wright, 2005; Lahoud, 2005; Eickelman and Piscatori, 2004; Khatab and Bouma, 2007; Feldman, 2003; and Khan, 2005, 2009.

The purpose of referring to the scholarly debate about compatibility of Islam and democracy is not to discuss which camp's stance is more valid, but rather to indicate that this debate is found also in the political agendas of secular and Islamists parties. Secular parties and representatives, on one hand, try to contain the rising Islamic movements by referring to the incompatibility of their identities and political platforms with modern western democratic practices and values. Islamists, on the other hand, tries to mobilize through referring that there is compatibility between Islam and democracy and there is a room for coexistence.

In this regard, Kedourie (1992) argues that concepts like representation, elections, and political institutions that are created according to laws and guarded by independent parliamentary assemblies which seem alien to Islam. Kedourie (1992) makes another argument by criticizing that all Muslims, regardless of their geographical and political location, consider themselves to have a one community (*Umma*). This makes the concept of a nation-state alien to Muslim politics and cannot be institutionalized in the Muslim community because it is antagonistic to the pervasive concept of the *Umma*. As the concept of nation-state is crucial for democracy, the introduction of democracy in an Islamic community would essentially be difficult (Kedourie, 1992).

Bernard Lewis (1990) has a similar proposition. Lewis (1990) argues that Islam's long political history represented autocracy in general. He asserts that *shari'a*, the divine law, is a major obstacle for Muslims to adopt democracy. He argues that because *shari'a* regulates all aspects of a Muslim's life, including his political life, it is difficult to imagine that Muslims would be able to develop any aspect of life outside religious regulation and jurisdiction. As a result, Lewis (1990) adds that the Islamic political history witnessed no parliaments, representative assemblies and councils, chambers of nobility or estates. There was sovereign power, the power of governors. Subjects had to show complete obedience and loyalty as part of their religious duty towards God. The prevailing idea has been that obedience is obligatory for whoever is in power (as cited in Voll, 2007: p. 172).

According to Lewis (1990), the argument is that Christianity, developed in the context of the Roman Empire, was forced to distinguish between God and Caesar, whereas in the

Islamic world religious and secular authority remained one and the same. In addition, it has been argued that Christianity differs from Islam in its focus on individual salvation, which Islam cannot provide. In other words, Lewis (1990) argues that the fusion between state and religion in the Islamic world, in a sense of a modern secular government, would be hard to imagine. In his terms, it is impossible to envision the evolution of political democracy in Islam as it evolved in the West (Lewis, 1990). He posits that the current issues of Muslim societies in advocating liberal reforms are largely due to some historical discourse that happened within the last 300 years. He acknowledges that the Islamic world once was at the forefront of human achievement being the world's strongest political, military and economic power, greatly contributing to human civilization, particularly in the sciences, arts and social studies.

However, as the course of history began to change, and European nations started to make significant progress in science and technology, the Muslim world slowly rolled into an age of stagnation. Consequently, Lewis (2002) argues that the West has developed and advanced politically to the extent where the Muslim world is unlikely to catch up within any reasonable time period. Furthermore, Lewis (2010: p. 66) referred to Muslim societies as a polity ruled by God where the law was God's law, and he emphasized that Islamic teachings are not suitable for building genuine democratic regimes, at least in a Western liberal democratic sense.

However, other scholars try to demonstrate that Islam has many social and political factors that can generate a successful democratic society. According to Feldman (2003), political Islam and Western liberal democracy are two big "mobile" or "portable" ideas that are very compatible with each other. He refers to Islamic democracy, which draws Islam's values and ideals that are democratic in nature and tend to establish democratic institutions (Feldman, 2003: p. 25). Noah Feldman (2008) has provided a comprehensive account on the decline of Islamic states towards the end of the Ottoman empire, as well as explaining why they have been on the rise, for the last two decades, to reclaim the glory of their past. Feldman (2008) claims that Islam has a unique constitutional arrangement of balanced powers and the rule of law which provides a delicate, effective

and functional balance of power between the laws, *Shari'a* and the executive body *caliph*, which lasted for centuries.

Esposito and Voll (1996) shed light on the relationship between Islam and Democracy referring to the global trend of democratization and Islamism or political Islam. Esposito and Voll (1996) concentrate much on the common elements between Islam and democracy as an evidence of the compatibility between them. They claim that democracy and Islamic resurgence have become complementary forces in many countries. Esposito and Voll (1996) use six case studies: Algeria, Egypt, Iran, Malaysia, Pakistan, and Sudan, to examine the diversity of Muslim experiences and experiments. These case studies prove that there is a rise to a multiplicity of agendas and strategies that may lead to one form or another of democracy if given a proper environment. The conclusion is that Islam seems to have a lot of meanings. This means that there are multiple understandings of Islam and multiple interpretations, which prioritize certain aspects of the religion. Consequently, throughout its long history, Islam had been both a source of oppression as well as a source of freedom and resistance to tyranny. The most important historical legacy of Islamic law, *Shari'ah*, had been to limit the powers of political leaders (Esposito and Voll, 1996).

This debate has impacted different countries where there is a huge community of Muslims and there are clear demands of importing western democratic values. Turkey as a Muslim-majority country has been a secular democratic state, a member of NATO, a candidate for membership in the European Union, a long-standing U.S. ally as the host of Ğncirlik Air Base, and a key hub for logistical support missions in Afghanistan and Iraq. As such, Turkey is pivotal to U.S. and Western security interests in a critical and unstable zone where the Middle East, the Balkans, and the Caucasus intersect. Turkey's importance derives not only from its geopolitical position, but also from how this debate runs in the public about the coexistence of Islam with secular democracy, globalization, and modernity. As it will be seen later in this study, the Turkish experiment with the rule of a party with Islamic identity- the AKP- within a framework of strict secularism, has generated controversies over the boundaries between secularity and religion in the public sphere. For instance, tensions were brought to a head over the selection of the new

president and that led to parliamentary elections, along with a new mandate for the party, in July 2007 (Rabasa & Larrabee, 2008).

Consequently, two explanations were proposed in the literature for the electoral success of AKP (Kumbaracibasi, 2009). One explanation proposes that the AKP success stems from the hypothesis that voters in Turkey are shifting to be more religious and socially conservative (Kumbaracibasi, 2009: 106). The second explanation is that voters were dissatisfied with the performance of other parties and previous governments (Kumbaracibasi, 2009). Whether the first hypothesis is more valid or the second one, AKP saw it an advantageous tactic to tackle both issues (the performance dissatisfaction and the increase of conservatism) by sorting an Islamic identity and trying to improve the performance at the same time.

Being aware of this long debate, the AKP has designed a special strategy to tackle this debate, which constitutes the public dispute around the need of either secular regimes or Islamic ones. As in the hypothesis of this paper, the AKP tries to appear as democratic semi-secular and semi-Islamic party to avoid splitting the votes or losing the support of one camp. Ergun Ozbudun (2006) has looked at the history of the votes of Islamist parties in parliamentary and general local elections and argues, based on supportive statistics, that AKP appears to be successful in “*bringing together former center-right voters (conservatives), moderate Islamists, moderate nationalists, and even a certain segments of the former center-left (seculars)*” (Ozbudun, 2006: 546)”. He also argues that the AKP has successfully bridged the old-deep cleavage between secularists and Islamists contributing to the consolidation of democracy in Turkey (Ozbudun, 2006: 545-555).

Additionally, Gumuscu and Sert (2009) relate the AKP success to an economic factor. They argue that the good business and interests with bourgeoisie class as the AKP’s liberal economic orientation, ideology on democracy, human rights, and freedom has aided this class members and led to establishing well-defined business relations (Gumuscu & Sert, 2009: 966). They reflect one aspect of supporting AKP as an economy propeller.

Yet, much of critique found in the literature about the AKP policy and strategy. Back to the debate about Islam and democracy, Sultan Tepe (2005) argues that there are so many questions about how the Islamic nature of the party and its ethnic identity might affect the change into democracy. He sees that the AKP's programs of institutional change might be useful in some sense, but it does not in essence carry out clear institutional designs compatible with democracy. Besides, he argues that it is important that the AKP defines publicly its perceptions about the public role of Islam and Islamic democracy (Tepe, 2005: 81-82).

Brookings institute in Doha argues that despite the fears of the west to turn the Islamists their countries into intolerant, authoritarian, and anti-western states, the AKP proposes a role model of passive, not assertive, secularism and pragmatic, not radical Islam (Kuru, 2013: 2, 6). Erdogan, in three-country tour stressed on the “a secular state is no anti-religious but guarantees religious freedom” (Kuru, 2013: 2). Erdogan’s statement, herein, can be described as foxy and purposive, not meaningless. In several surveys about the Turks perception of Islamism, despite that 70 percent of the turks are practicing Muslims, only nine percent support sharia-based state (Kuru, 2013: 4).

### **Islam’s Ethnoreligious Identity and the State**

What is the relationship between the rise of the Islamic identity and the nation-state? The recent wave of revolutions and revolutionary attempts in North Africa and the Middle East has not only been important political events, but they have also re-sparked old academic debates. The calls for democracy in these countries have made some authors challenged Huntington's argument on the incompatibility of Islam and democracy. Islamic resurgence and democratization are two of the most important developments of the final decades of the twentieth century. Within these two developments, the question of the relationship between the teachings of Islam and the principles of democracy is, undoubtedly, one of the most pressing issues facing the Muslim world today. There is a misconception that Islam and democracy are somehow incompatible.

Authoritarian regimes have relied on their military and security forces rather than the ballot box to ensure their continued rule. Many countries such as Egypt, Algeria, Syria,

Tunisia, Saudi Arabia, and Turkey (formerly) fostered authoritarian cultures and values. Political parties, unions, and professional associations have required government's approval and may be regulated, repressed, or simply banned. Governments have controlled educational and religious institutions, from curriculum and jobs to speeches and sermons. In many of these states, dissent can result in arrest, imprisonment, and torture. Does this lack of real power sharing mean that democracy has been nonexistent in the Muslim world, or incompatible with Islam? In fact, Muslims around the world have experienced various democracies in different, often limited, forms. Demographically, two thirds of Muslims live under democratic systems. In recent years, some governments moved cautiously and sometimes reluctantly to introduce elections (Esposito, 2011).

Contrary to some revolutionary opposition, Islamic movements in Tunisia, Egypt, Turkey Malaysia and Indonesia, in the form of political parties or civil organizations have been and still continue to be active and participate within the framework of the government institutions. In Egypt, Jordan and Tunisia, the main opposition parties are of Islamic background. The Muslim Brotherhood in both Egypt and Jordan and the Al Nahda party in Tunisia are clear examples.

In most countries where Islamists have a voice, Islamist movements are parts of the government or are themselves the ruling force in the political system. Esposito and Voll (1996) list them as: (1) revolutionary opposition to the existing political system, (2) legal or co-operating opposition operating within the existing political system, (3) active participation in government in alliance or coalition with other political forces, and (4) the controlling force in the existing political system.

According to Gudrun Kramer (1993-1997), Islamic resurgence is one of the most important developments of the final decades of the 20th century. The values of this phenomenon on civilization are always perceived to clash within the context of western liberalism. The debate concerning Islam and democracy is by no means new. Since the 1980s, this debate has been infused with some fresh thinking and considerable grass roots movement. A growing number of Muslims, including many Islamic activists, have called

for a pluralist democracy, or at least for some of its basic elements, such as the rule of law, protection of human rights, political participation, government control and accountability (Kramer, 1993).

### **AKP: A Decade of Key Events**

In 2002, the AKP won its first electoral race after years of political instability and an unprecedented financial crisis. In 2003, Erdoğan took over from his close ally Abdullah Gul as prime minister after constitutional changes to overcome a ban on him holding the post due to a previous conviction for reciting an Islamist poem (BBC News, 2002). In 2004, the AKP wanted to start accession talks with the European Union, and launched a massive range of democratic reforms such as allowing Kurdish language broadcasts on public television. In 2005, negotiations between Turkey and the EU have formally begun. In 2007, a political crisis erupts surrounding the election of a new president after the AKP announces that foreign minister Abdullah Gul is a candidate. With the AKP's vote share rose to 46.7 percent, Erdoğan remained prime minister and a month later the parliament elects Gul as president. In 2008, the AKP initiated a constitutional amendment to lift the ban on the Islamic headscarf at universities. The headscarf ban was finally eased in 2011. Between 2011 and 2015, the AKP kept its momentum by winning its third and fourth consecutive election victories. The AKP has witnessed continuous success in a series of election rounds that reveal the deep roots of the AKP in Turkish society. As a result of the tangible improvements that the AKP has achieved, the majority of the Turkish population can be argued that they become supporters of the party that adopted an open agenda that aims to revive Turkey's past power and dominance as well as its prominent role as an Islamic player.

Prior to 2002, Islamists' parties in Turkey were successively banned from politics, but have reemerged recently after reframing their discourse in response to their perceived opportunities and constraints. The current AKP has gone a step further than its Islamist predecessors, dramatically highlighting a process of institutional change and ideological moderation (Mecham, 2004). The increasing moderation of the Islamist movement is the result of several institutional factors. The Turkish Islamists have been given the political

freedom in a liberalized autocracy. They could make strategic choices in a political system that rewards political participation with credible opportunities for power. The recurrent and repeated successes in elections prove that AKP could reach out to the long-debated topic of coexistence between Islam and democracy.

As stated by Cacha (2003), the AK Party is a successful example showing that political participation and the opportunities available for the Islamist parties can generate political change, resulting in the transformation of Islamism to non-Islamism in the Turkish context. The AK Party has successfully analyzed, understood and responded to the concerns of ordinary people as it did previously to compete in the elections to run the country (Caha, 2003). The people prized the party's successful efforts and the transformation in the very first election in which the party competed. Scholars have noted that the victory of the AKP — was the endorsement of Erdoan who, during the campaign, ran on the issues of human rights, liberties, economic development and integration into the EU (Caha, 2003: p. 102).

Çarkolu (2007) shows that the AKP increased its share of the vote to 47 percent in the July elections of 2007, while the main opposition parties receiving only 21 percent (Çarkolu, 2007). This election was primarily shaped by evaluations of performance (economic or otherwise) rather than by ideological cleavages. As a matter of fact, a survey by a polling firm, which predicted the outcome of the 2007 election with precision, found that the top two concerns drive people to cast a ballot for the AKP that year were not religious sentiments, but rather the party's economic-policy performance (Dagi, 2008). In the 2007 elections, even many Turkish-Armenians reportedly voted for the AKP Party (Yilmaz, 2009).

This could be a significant sign showing how successfully the formerly intolerant and exclusivist Islamists may have transformed their vision and political ideology. But this left a kind of a puzzle of how strategically those Islamic politicians could convince non-Muslim citizens in the country to vote for them. To make this puzzle more difficult, the latest elections of 2015 provides similar indication that the AKP did not lose its

momentum. In fact, their victory was enormous as they won almost 50% of the votes out of 95% of counted votes securing 325 seats out of 550 parliamentary seats (Guardian, 2015).

### **The Appeal of Islamic Identity**

Looking at the appeal of the AKP ethnic identity, one could ask what explains the appeal of Islamic identity in Turkey. And what role does it play in forming the AKP's electoral strategy? Today, Turkey displays a different picture compared to that of most other Islamic countries. Islam in Turkey, unlike in other Islamic countries, only sits in the background of its secular regime. With the proclamation of the Kemalist Turkish Republic in 1923, Islam lost its privileged status in the political sphere. The separation of religious and political affairs was the most dramatic and forceful step taken by the Kemalist forces in the establishment of a Western-style regime. The radical shift towards secularization was grounded by equally radical changes at the bureaucratic, legal and legislative levels. Such changes included —the abolition of the sultanate and the caliphate in 1924, the adoption of the secular civil code of law from Switzerland in 1926, the abolition of religious courts and religious titles, and a constitutional amendment in 1937 declaring that the Turkish Republic was a secular state (Kanra, 2009: 526-527). These dramatic steps towards secularization transformed the circumstances in which religion and politics interacted in Turkey. Having lost its dominant position, for the first time, **Islamic identity** had to play a defensive role against an unfriendly state. This required a different type of interaction, changing continuously according to the dynamics of the time.

Following the closure by the Constitutional Court of a series of Islamist parties that had been created in the 1970s, and most importantly the ultimatum given by the military in 1997 to the coalition government, the AK Party was established in 2001 by the relatively young and moderate cadres of the Islamist movement of the 1990s. Although most of the principles of the new party were borrowed from the previous Islamist movements, the AKP leadership carefully dissociated them from the previous hard-liner tradition and adopted a pragmatist attitude and —a problem-solving approach which had grown out of —the local government experiences of the leadership cadre (Doğana, 2005: 430).

Breaking with the long-established anti-European sentiment of traditional Islam and defining themselves as —conservative democrat, they adopted a conservative attitude in the social arena and a liberal attitude towards the market (Coşara & Özmanb, 2004). They gained widespread support from those who were discontent with the existing order, especially among the lower middle-class state bureaucrats, the unskilled urban poor that were victimized by the waves of globalization, and the small and medium sized traders and manufacturers, particularly in the rapidly developing provincial towns of Anatolia (Insel, 2003).

Given the obvious Islamist background of their leaders and the newly adopted notion of conservative-liberalism, some regard the AKP to be a post-Islamist movement (Dağı, 2008). The party came to power after the 2002 elections during a time when the ruling parties of Turkey were incapable of dealing with the 2001 crisis and were enmeshed by a web of corruption and incompetence (Hale, 2005: 304). It became most apparent that the country was ready for change after the AKP's election victory in the 2002 general elections. The AKP won this election with one of the biggest majorities in the history of Turkish parliament (34 per cent of votes), and almost twice as much as the Republican People's Party, founded by Mustafa Kemal Ataturk (CHP) (Kanra, 2009: pp. 526-528). The AKP's victory was a clear sign of the broad acceptance, by the majority of Turkey's Muslim community, of the party's more liberal attitude, and shows how an Islamic identity is able to evolve and have the capacity to accommodate to surrounding conditions.

More importantly than the image that the AKP created was the change in their understanding of the relationship between Islam and the state. The party leadership was keen to not run a religious agenda. It has distinctive qualities and therefore, deserves special attention. In Turkey, the ruling party has an Islamic background and presents a unique case for political Islam. Yilmaz (2009) best expresses the unique case of AKP as follows:

*"What is unique about the AKP is that it is a movement, which formed into a political party. Its members are politicians. It explicitly rejects radical and militant types of Islam, it stays away from religious literalism, and tries to produce a kind of conservatism with a liberal tone. The AKP does not approve violence and militancy in the name of religion. The exclusion of militancy, literalism*

*and violence provides opportunity for the AKP to accommodate religiosity, plurality, democracy, secularity and modernity together.”* (Yilmaz, 2009:99)

The case of the AKP should be understood in terms of its political, social and cultural dimensions. The muddling of Islam with politics was seen as the main reason for the stagnation of the relationship with broader sections of the Turkish electorate. During the election campaign, the AKP continuously reiterated its loyalty to the main principles of the secular system, which continued after the election as well. The AKP’s story testifies to the different modes through which Islam can follow in its relationship with the state and politics, depending on the circumstances of the day. The years of uncertainty about how to deal with the Kemalist secular regime during the National Salvation Party (MSP), the Welfare Party (RP), the Virtue Party (FP), and the Felicity Party’s (SP) leadership, mainly under Professor Erbakan, appears to be heading towards a resolution by accepting a need for change. The clearest and the most important sign of this commitment came at the beginning of 2004. On January 10th, following an international conference in Istanbul, the AKP declared itself to be a conservative democratic party (Kanra, 2009: 529-531).

### **Denouncing Ethnic Roots: Ethnic Underpidding**

In his conference speech, Prime Minister Tayyip Erdoğan said that the AKP’s predecessors (referring to the RP, the FP and the SP parties) were acting as a political community on the basis of a certain ideology and appealing only to supporters of that ideology. Erdoğan described this as dangerous politics of **polarization** and drew a clear line between religion and politics. He asserted that establishing “a party in the name of religion would be an injustice to religion and he reiterated that the solution to this problem is to maintain a secular system” (Kanra, 2009: 52). Secularism, Erdoğan described, provides an essential tool to regulate the balance between religion and politics by keeping the state neutral and at an equal distance to all faiths and religions. One week later, Erdoğan repeated his views to a different audience within a different context. Attending a business conference in Saudi Arabia, Erdoğan said that the idea of having an Islamic common market was not that good. He further added that whatever happened,

foreign relations should not be based on ethnic and religious roots. Polarization will emerge if such institutions are established (Kanra, 2009: 529-531).

In another scene, Erdoğan called for secular Egypt as he sees there is a need for secular constitution there. “Do not be wary of secularism. I hope there will be a secular state in Egypt,” Erdogan said in *Dream Private Satellite Channel* (Egypt Independent, 2011). Appearing on Egyptian channel, he stressed that “a secular state does not mean that people are atheists, it means respect for all religion... Ninety-nine percent of the population in Turkey is Muslim. There are Christians, Jews and minorities, but the state treats them equally. This is recognized by Islam and has been true throughout the Islamic history,” (Kessler, 2011).

It seems that the adoption of some secular principles by the AKP, like the separation of religion and political affairs, is of primary importance to its electoral strategy. This is a clear paradigm shift in Islamic politics, responding to the conditions of the day. The most important consequence of this paradigm shift by the AKP is that it has created a climate for dialogue between the once extremely alienated sections of the Turkish society (Kuru, 2013).

Another key characteristic of the AKP’s strategy is its pragmatic understanding of Muslim politics. It is this understanding that allows the party to comfortably occupy a position somewhere between assertive secularism on one hand and Islamism on the other hand. According to this perspective, Muslim individuals and groups can promote their Islamic views in a democratic system through legislative processes, participation in political or judicial institutions, and engagement with civil society and the media. They can reflect Islamic ethics by, for instance, fighting corruption and nepotism, or promoting justice. Islamic parties can also promote their diverse understandings of *Sharia* through free and democratic processes. In this way, there is no need to formally name the state Islamic in order to promote Islamic principles in politics. After all, there are many outwardly Islamic states that in reality fail to uphold what many would perceive to be Islamic principles in everyday politics (Kuru, 2013).

Related to the previous note, while some argue that the AKP has successfully renegotiated the religious/secular divide in Turkey since taking power in 2002, others counter this argument by stating that the party has distanced itself from its previous affiliations to render its challenge to Kemalism insubstantial or even nonexistent. In any case, despite trepidation on the part of the military and its allies concerning the Islamization of Turkish politics, the AKP has not imposed Islamic law but instead has endorsed what Kuru (2013) describes as a role model in which religious ethics provide inspiration.

Today, in a simple quick comparison to its neighbors, the AKP's leadership represents a modern and highly dynamic face of a newly emerging Muslim identity that regards the emerging Islamic institutions and religious networks as instruments of political mobilization. According to Yavuz (2009), the party is not a religious one since it does not aim to institute radical religious transformation of the state and society (Yavuz, 2009). The AKP's goal is to maximize its seats in parliament in order to increase its political power by appealing to its Muslim citizens. However, the AKP can be considered to be Islamic to the extent that it is deeply involved in Islamic social ethics and cultural norms and stresses the religious values and interests of its pious electorate (Yavuz, 2009).

However, what can be seen very controversial is that Erdogan may tend to avoid any public and explicit statements about his religious beliefs. He tries to let his actions build charismatic appeal especially to religious people. For example, the Turkish government has permitted girls to put on hijab, religious headscarf, while going to school. This tradition was legally forbidden during the era of the secular state as a public expression of faith. In addition, the number of the pupils of the religious schools has risen from 63,000 to almost a million, and the number of those schools increased from 876 to 1,008 in 2013, wherein Erdogan celebrated the opening of some of them (al-Shibeeb, 2014).

There is another interesting point that can account for the success of the AKP appeal. The party could smoothly make use of the economic conditions that best suit certain provinces. The clusters of settlements where the AKP has a strong and positive relationship with income consist mainly of places known as the Anatolian Tigers that showed unprecedented success in the global economy during the 1980s and 1990s. Those

provinces were quick on the uptake of potentials in the globalization and the places that became the venues of entrepreneurship and gained the tag of Anatolian tigers during that period. The AKP, defending liberal economic policies, has strong relationships with the electorate situated in these regions (Kuru, 2013).

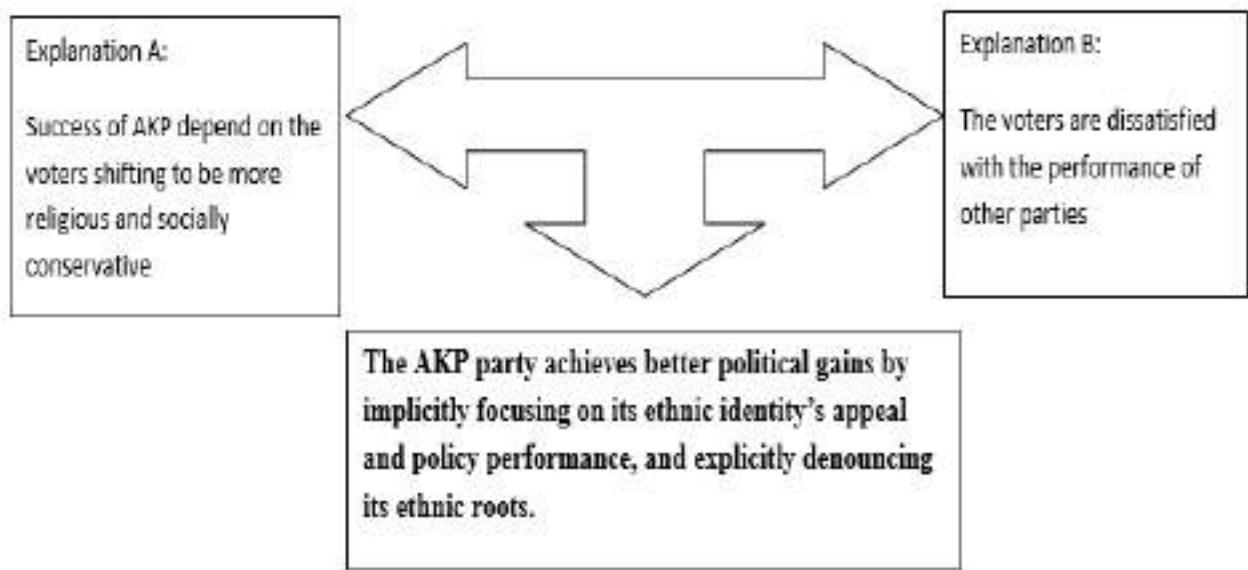
In general terms, the AKP leadership advocates that there is no contradiction between their Islamic way of living and their support for democracy. The party leadership participates in religious ceremonies, along with their headscarf-covered wives and daughters, which differentiate them from other secular parties. Moreover, the AKP strictly rejects the Kemalist interpretation of secularism as absolute enmity against coexistence with religion (Islam). Most notably, the AKP views Islam as contributing to sacred values in society that are fully compatible with modern democratic state building. According to Achilov (2010), the AKP represents itself as a Conservative Democratic Party, rooted in reformist Islamic values, which is committed to building a highly functional pluralist and democratic state in which both secular and religious institutions can freely coexist. The AKP is a modern democratic party with roots in Islam that is capable of fostering civil liberties and political rights while enhancing the democratic system (Achilov, 2010).

### **Conclusion: Ideological Manipulation**

There is a kind of ideological manipulation in the way AKP function and correspond to its environment. This smart manipulation is very challenging and can be a sort of test that can determine the future of the party. Indeed, policy making in the country has witnessed failures as well as successes in the past two decades. But, it seems that the AKP is dangerously trying to do many things at the same time by manipulating its voters as well as allies, partners, and even its regional neighbors. For example, the AKP is trying to consolidate democracy and revive Islamic values to produce an Islamic version of democracy, boost economic growth, spread their version of democracy in the region, and at the same time join the EU, fight Islamic fundamentalism and terrorism, and work closely with Western partners who are enemies to other Islamic states. Lesser (2008) has

correctly pointed out that Turkey should focus more on priority-setting rather than multi-dimensional engagement, in order to make its proactive and constructive foreign policy realistic and effective. This dangerous manipulation has led to make the country suffers from its worst bloodshed since long time as hundreds of people were killed by security forces, huge bombings have occurred, and enormous waves of Syrian refugees moved to Turkey. Thus, if the hypothesis of this paper appears to be valid, the question would then turn to be how far the AKP party can go with its political domination, and when could a change happen in the behavior of the Turkish voter?

All in all, the ethnoreligious roots of the AKP cannot solely explain the electoral victorious momentum although it is a significant electoral strategy. Although, the AKP's initial success after its first election victory in 2002 was due to its ability to distance itself from the title of Islamist and define itself instead as Muslim democratic, its ability to initiate a broader political and economic agenda with democratic reforms at the center, and its promise to become a government free of corruption added more electoral momentum. Such initiatives allowed the AKP government to build alliances with groups and movements that might otherwise have been skeptical of allying with a political party with Islamic credentials. The AKP governments have maintained its reformist character by bringing Turkey closer to the European Union, initiating democratic reforms, avoiding populist economic policies in favor of providing sound public policy and removing the army's tutelage from the political system. Though, it is strongly valid to argue that the AKP's manipulative ethnoreligious appeal was the key element that produced a tactical appealing strategy to generate more mass and support as portrayed below.



However, this paper does not claim its completeness and comprehensiveness. There is a critical need for a more comparative analysis to test the validity of this hypothesis by looking at other parties with similar political and ethnic credentials in neighboring countries such as the Justice and Equality parties in Tunisia and Egypt. This can open the door for more generalizations and rigorous explanation as this study is a humble attempt to explore the political phenomenon of the AKP electoral viability. More statistical evidence is needed as it was absent due to the limitation of the scope of the study and the available sources and data. It is, also, recommended at a later stage to conduct elite interviews to provide more solid data and interpretations as well as more news and media data to produce more rigorous and generalizable content analysis over the AKP's political discourse. Press statements, official comments and even informal conversations of key leader of the AKP "Erdoğan" can be an excellent testing indicator to the validity of this hypothesis. Some of those conversations and statements have been analyzed in this paper. Though due to the limited time and resources, it was inapplicable to scan all those statements and classify them into certain categories that stem from the hypothesis. The best way is to segment those statements into statements that contain implicit or explicit ethnic outbidding or underbidding. In addition, there should be a clear time frame that takes into consideration the proximity of the elections and the context it was taken from.

## Bibliography

- Achilov, D. (2010). *PHD Dissertation: CAN ISLAM AND DEMOCRACY COEXIST? A CROSS-NATIONAL ANALYSIS OF ISLAMIC INSTITUTIONS IN THE MUSLIM WORLD.* Retrieved from Arizona University, Arizona University Open Repository: <http://arizona.openrepository.com/arizona/handle/10150/193975>
- al-Shibeeb, D. (Alarabiya News: 2014, 12 22). Did Erdogan reverse secularism in schools in 2014? KSA. Retrieved 12 04, 2015, from <http://english.alarabiya.net/en/perspective/analysis/2015/12/03/EU-Turkey-migrant-deal-brings-some-doubts.html>
- Babbie, E., & Benaquisto, L. (2010). *Fundamentals of Social Research*. Nelson Education.
- Barber, B. R. (2008, August 4). [www.resetdoc.org](http://www.resetdoc.org/story/00000000929). Retrieved October 2015, from <http://www.resetdoc.org/story/00000000929>
- Caha, O. (2003). Turkish Election of November 2002 and the Rise of "Moderate" Political Islam. *Turkish Journal of International Relations*, 2(1), 95-116.
- Çarkoğlu, A. (2007). A new electoral victory for the „pro-Islamists“ or the „new centre-right“? The justice and development party phenomenon in the July 2007 parliamentary elections in Turkey. *South European Society & Politics*, 12(4), 501-519.
- Chandra, K. (2006). WHAT IS ETHNIC IDENTITY AND DOES ITMATTER? *Annual Reviews*(9), 397-424.
- Collier, David, and James Mahoney. 1996. "Insights and Pitfalls: Selection Bias in Qualitative Research." *World Politics* 49 (1) (October 1): 56-91.
- Coşara, S., & Özmanb, A. (2004). Centre-right politics in Turkey after the November 2002 general election: neo-liberalism with a Muslim face. *Contemporary Politics*, 10(1), 57-74.
- Dagi, I. (2008). Turkey's AKP in Power. *Journal of Democracy*, 19(3), 25-30.
- Dion, D. (1998). Evidence and Inference in the Comparative Case Study. *Comparative Politics*, 30(2), 127-145.
- Doğana, E. (2005). The Historical and Discursive Roots of the Justice and Development Party's EU Stance. *Turkish Studies*, 6(3), 421-437.
- Eisenhardt, K. M. (1989). Building Theories from Case Study Research. *The Academy of Management Review*, 14(4), 532-550.
- Esposito, J. L. (2011). The Future of Islam and US–Muslim Relations. *Political Science Quarterly*, 126(3), 365-401.
- Esposito, J. L., & Voll, J. O. (1996). *Islam and democracy*. Oxford University Press on Demand.
- Feldman, N. (2003). After Jihad. *America and the Struggle for Islamic Democracy*, Farrar, Strauss & Giroux, New York.

- Feldman, N. (2008). Why Shariah?. *New York Times*, 16.
- Forbes, H. D. (2004). *Handbook of Political Theory* . (G. F. Gaus, & C. Kukathas, Eds.) London: Sage Publications .
- Funk, N. C., & Said, A. (2004). ISLAM AND THE WEST: NARRATIVES OF CONFLICT AND CONFLICT TRANSFORMATION. *International Journal of Peace Studies*, 9(1), 13.
- Geddes, Barbara. 1990. "How the Cases You Choose Affect the Answers You Get: Selection Bias in Comparative Politics." *Political Analysis* 2 (1) (January 1): 131–150.
- Gerring, J. (2005). Causation: A Unified Framework for the Social Sciences. *Journal of Theoretical Politics*, 17(163).
- Gerring, J. (2007). *Case Study Research: Principles and Practices*. NY: Cambridge University Press.
- Gerring, J., & Coppedge, M. (2011). Conceptualizing and Measuring Democracy: A New Approach. *Perspectives on Politics*, 9(2), 250.
- Govier, T. (2008). Violence, Nonviolence, and Definitions: a dilemma for peace studies. *The Canadian Journal of Peace and Conflict Studies*, 40(2), 61-83.
- Guardian, T. (2015, November 02). Turkey election: Erdogan and AKP return to power with outright majority. Ankara, Ankara, Turkey : The Guardian . Retrieved November 22, 2015, from <http://www.theguardian.com/world/2015/nov/01/turkish-election-akp-set-for-majority-with-90-of-vote-counted>
- Gumuscu, S., & Sert, D. (2009). The Power of the Devout Bourgeoisie: The Case of the Justice and Development Party in Turkey. *Middle Eastern Studies*, 45(6), 953.
- Hale, W. (2005). Christian Democracy and the AKP: Parallels and Contrasts. *Turkish Studies*, 6(2), 293-310.
- Hodge, R., & Kress, G. (1988). *Social Semiotics*. Ithaca: Cornell University Press .
- Horowitz, Donald L. 1985. *Ethnic Groups in Conflict*. Berkeley: University of California Press, pp.3-54.
- Huber, E., & Dion, M. (2002). Revolution or Contribution? Rational Choice Approaches in the Study of Latin American Politics. *Latin American Politics and Society*, 44(3), 1-28.
- Insel, A. (2003). The AKP and Normalizing Democracy in Turkey. *The South Atlantic Quarterly*, 102(2/3), 293-308.
- Kanra, B. (2009). *Islam, Democracy and Dialogue in Turkey* (Vol. 1). Burlington: Ashgate.
- Kedourie, E. (1994). *Democracy and Arab Political Culture* . London : Frank Cass & Co. Ltd.
- Kedourie, E. (1992) Democracy and Arab Political Culture, Washington D.C: Washington Institute for Near East Policy
- Keyman, E. F. (2010). Globalization, Modernity and Democracy: Turkish Foreign Policy 2009 and Beyond. *PERCEPTIONS: JOURNAL OF INTERNATIONAL AFFAIRS*, XV(3-4), 1-

20. Retrieved from [http://sam.gov.tr/tr/wp-content/uploads/2012/07/perceptions\\_Autumn\\_Winter\\_2010.pdf#page=7](http://sam.gov.tr/tr/wp-content/uploads/2012/07/perceptions_Autumn_Winter_2010.pdf#page=7)
- Keyman, E. F., & Öniş, Z. (2007). *Turkish Politics in a Changing World: Global Dynamics and Domestic Transformations*. Istanbul: Istanbul Bilgi University Press.
- Kramer, G. (1993). *Islamist Notions of Democracy*. Middle East Research and Information Project, Inc. (MERIP).
- Kumbaracibasi, A. C. (2009). *Turkish Politics and the Rise of the AKP: Dilemmas of Institutionalization and Leadership Strategy*. NY: Routledge .
- Kuru, A. T. (2013). *MUSLIM POLITICS WITHOUT AN "ISLAMIC" STATE: CAN TURKEY'S JUSTICE AND DEVELOPMENT PARTY BE A MODEL FOR ARAB ISLAMISTS?* Doha: Brookings Doha Center. Retrieved 11 22, 2015, from [http://www.brookings.edu/~media/research/files/papers/2013/02/21%20akp%20model%20kuru/bdc\\_akp%20model\\_kuru.pdf](http://www.brookings.edu/~media/research/files/papers/2013/02/21%20akp%20model%20kuru/bdc_akp%20model_kuru.pdf)
- Lehmann, D. F. (1998). undementalism and Globalism. *Third World Quarterly*, 607-634.
- Lesser, I. O. (2008). Turkey to face tough foreign policy choices. (Y. P. DOĞAN, Interviewer) Retrieved 11 17, 2015, from [http://www.todayszaman.com/newsDetail\\_openPrintPage.action?newsId=153135](http://www.todayszaman.com/newsDetail_openPrintPage.action?newsId=153135)
- Lewis, Bernard. "The roots of Muslim rage: why so many Muslims deeply resent the West, and why their bitterness will not be easily mollified." *Atlantic* Sept. 1990: 47+. *Academic OneFile*. Web. 24 Nov. 2015.  
[http://go.galegroup.com/ps/i.do?id=GALE%7CA9389457&v=2.1&u=ocul\\_mcmaster&it=r&p=AONE&sw=w&asid=5c3ed944abb8451aee8c8f180e6da724](http://go.galegroup.com/ps/i.do?id=GALE%7CA9389457&v=2.1&u=ocul_mcmaster&it=r&p=AONE&sw=w&asid=5c3ed944abb8451aee8c8f180e6da724)
- Lewis, B. (2002). *Arabs in history*. OUP Oxford
- Lewis, B. (2010). *Faith and power: religion and politics in the Middle East*. Oxford University Press.
- Louis Guttman on theory and methodology : selected writings*. (1994). Aldershot, Hants, England ; Brookfield, Vt. : Dartmouth, ©1994.
- Mahoney, J. (2007). Qualitative Methodology and Comparative Politics. *Comparative Political Studies*, 40(2), 122-144.
- Mecham, Q. (2004). From the ashes of virtue, a promise of light: the transformation of political Islam in Turkey. *Third World Quarterly*, 25(2), 339-358.
- Miller, L. E., & Martini, J. (2012). *Democratization in the Arab World: Prospects and Lessons from Around the Globe*. California : RAND Corporation .
- Munck, G. L., & Verkuilen, J. (2002). Conceptualizing and Measuring Democracy: Evaluating Alternative Indices. *Comparative Political Studies*, 35(1), 5-34.
- Ozbudun, E. (2006). From Political Islam to Conservative Democracy: The Case of the Justice and Development Party in Turkey. *South European Society and Politics*, 11(3-4), 543-557.

- Rabasa, A., & Larabee, F. S. (2008). *The rise of political Islam in Turkey* (Vol. 726). Rand Corporation.
- Ross, D. (2004). *Violent Democracy* (3 ed.). Cambridge: Cambridge University Press.
- Tepe, S. (2005). Turkey's AKP: A Model "Muslim-Democratic" Party? *Journal of Democracy*, 16(3), 69-82. Retrieved 11 22, 2015, from [https://muse-jhu-edu.libaccess.lib.mcmaster.ca/journals/journal\\_of\\_democracy/v016/16.3tepe.html](https://muse-jhu-edu.libaccess.lib.mcmaster.ca/journals/journal_of_democracy/v016/16.3tepe.html)
- Voll, J. O. (2007). Islam and democracy: Is modernization a barrier? *Religion Compass*, 1(1), 170-178.
- Wadeen, L. (2002). Conceptualizing Culture: Possibilities for Political Science. *The American Political Science Review*, 96(4), 713-728.
- Wolff, R. (1969). On Violence. *Journal of Philosophy*, 66(19), 606.
- Yavuz, M. H. (2009). *Secularism and Muslim democracy in Turkey* (Vol. 1). Cambridge: Cambridge University Press.
- Yilmaz, I. (2009). Muslim Democrats in Turkey and Egypt: Participatory Politics as a Catalyst. *Insight Turkey*, 11(2), 93-112.
- al-Shibeeb, D. (2014, 12 22). Did Erdogan reverse secularism in schools in 2014? KSA. Retrieved 12 04, 2015, from <http://english.alarabiya.net/en/perspective/analysis/2015/12/03/EU-Turkey-migrant-deal-brings-some-doubts.html>
- Champion, M., & Bradley, M. (2011, 09 15). Islamists Criticize Turkish Premier's 'Secular' Remarks. NY, USA. Retrieved 12 07, 2015, from <http://www.wsj.com/articles/SB1000142405311904491704576570670264116178>
- Kanra, B. (2009). *Islam, Democracy and Dialogue in Turkey*. Farnham, England: Ashgate Publishing Ltd.
- Kessler, O. (2011, 09 15). Brotherhood Angry at Erdogan Call for Secular Egypt. Jerusalem, Israel. Retrieved 12 07, 2015, from <http://www.jpost.com/Middle-East/Brotherhood-angry-at-Erdogan-call-for-secular-Egypt>
- Staff. (2011, 09 13). Erdogan Calls for a Secular Egypt. (Staff, Ed.) Cairo, Egypt. Retrieved 12 07, 2015, from <http://www.egyptindependent.com/news/erdogan-calls-secular-egypt>
- Zuber, C. I. (2011). Beyond outbidding? Ethnic party strategies in Serbia. *Party Politics*, 19(5), 758-777. doi:10.1177/1354068811410368



September 10, 2013

To Whom It May Concern:

I am writing this letter of confirmation to acknowledge the work of Mr. Ramzi Abdelrahman around the structring and editing the Arabic version of the UN High Level Panel Report on the Post-2015 Development Agenda which was published on June 30, 2013. The Arabic report was widely distributed to relevant stakeholders, including multilateral agencies, governments, international organizations, NGOs across the Arabic speaking world and beyond. It is currently placed on the UN High Level Panel on the Post-2015 Development website.

Mr Abdelrahman incredible knowledge on international development issues, as well as cultural and linquistic expertise lent themselves to the excellent quality of the report itself. His dedication, hard work and commitment reflected his desire to contribute to the work around the report.

Please do not hesitate to contact me if there are any questions on the work he did for the Arabic translation of the High Level Panel Report on the Post-2015 Development Agenda. I can be contacted by email at [hbesada@nsi-ins.ca](mailto:hbesada@nsi-ins.ca) or [hany.besada@post2015hlp.org](mailto:hany.besada@post2015hlp.org). I can also be reached by phone at 613 854 6423.

Thank you and best wishes

Hany Besada  
Theme Leader & Senior Researcher  
North-South Institute

Research Specialist  
UN High Level Panel Secretariat, Post-2015 Development Agenda

# **Vocational Education & Training (VET) in Qatar**

## **A span of Domestic Challenges**

By

Ramzi Abdelrahman

2014

## **Table of Contents**

|                                                    |           |
|----------------------------------------------------|-----------|
| Acronyms & Abbreviations .....                     | 3         |
| Research Problem .....                             | 4         |
| Research Questions .....                           | 4         |
| Significance of Research.....                      | 4         |
| Methodology of Research .....                      | 5         |
| VET Literature .....                               | 7         |
| <br>                                               |           |
| <b>Turbulent Demography and labor Market .....</b> | <b>11</b> |
| <br>                                               |           |
| <b>Significant Transformation .....</b>            | <b>13</b> |
| <br>                                               |           |
| <b>Unsustainable VET Policy .....</b>              | <b>17</b> |
| <br>                                               |           |
| <b>A Scope of Environmental Challenges.....</b>    | <b>20</b> |
| <br>                                               |           |
| <b>Microenvironmental Challenges .....</b>         | <b>22</b> |
| <br>                                               |           |
| <b>Macroenvironmental Challenges .....</b>         | <b>29</b> |
| <br>                                               |           |
| <b>Final Conclusion .....</b>                      | <b>41</b> |
| <br>                                               |           |
| Bibliography .....                                 | 45        |

## **Acronyms and Abbreviations**

|                     |                                                                                                                                                                                                                                    |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CEDEFOP             | European Union Centre for the Development of Vocational Training                                                                                                                                                                   |
| ETS                 | Education and Training Sector                                                                                                                                                                                                      |
| EU                  | European Union                                                                                                                                                                                                                     |
| GDP                 | Gross Domestic Product                                                                                                                                                                                                             |
| GSDP                | General Secretariat for Development Planning                                                                                                                                                                                       |
| HEI                 | Higher Education Institute                                                                                                                                                                                                         |
| ICT                 | Information and Communications Technology                                                                                                                                                                                          |
| NCVER               | National Center for Vocational Education Research                                                                                                                                                                                  |
| NDS                 | National Development Strategy                                                                                                                                                                                                      |
| MDG                 | Millennium Development Goal                                                                                                                                                                                                        |
| QCEA                | Comprehensive Educational Assessment                                                                                                                                                                                               |
| PISA                | Programs International Students' Assessment                                                                                                                                                                                        |
| PPP                 | Public-Private Partnerships                                                                                                                                                                                                        |
| TIMSS               | Trends in International Mathematical and Science Study                                                                                                                                                                             |
| TNC                 | Transnational Corporations                                                                                                                                                                                                         |
| QFIS                | Qatar Faculty of Islamic Studies                                                                                                                                                                                                   |
| QIA                 | Qatar's Investment Authority                                                                                                                                                                                                       |
| QNV 2030            | Qatar's National Vision 2030                                                                                                                                                                                                       |
| QSA                 | Qatar Statistics Authority                                                                                                                                                                                                         |
| R&D                 | Research and Development                                                                                                                                                                                                           |
| SEC                 | Supreme Education Council                                                                                                                                                                                                          |
| TVET                | Technical Vocational Education and Training                                                                                                                                                                                        |
| UN                  | United Nations                                                                                                                                                                                                                     |
| UNESCO Organization | United Nations Educational, Scientific and Cultural Organization                                                                                                                                                                   |
| VET                 | Vocational Education and Training                                                                                                                                                                                                  |
| VET Sector          | A market sector that includes many VET systems and that is mainly affected by macro-environmental forces and factors                                                                                                               |
| VET System          | A vocational learning system comprising interrelated institutional hierarchies and stakeholders within a particular micro-environmental level; distinguished by its unique curricula, objectives, programs, plans and evaluations. |

## **Research Problem**

The national development strategies in Qatar were designed to increase the human capacity of labors by attaining specific development objectives. The policy-makers in this country have therefore set Qatar National Vision 2030 encouraging everyone to commit to the strategy's frameworks<sup>1</sup>. Those strategies have encouraged VET organizations to follow specific approaches to meet the current and future needs of labor market. However, the development strategies have been challenged with several domestic and international forces affecting the national educational policy and the vocational approaches in Qatar. Several projects and plans were set to fortify the VET sector in Qatar, but without real execution leaving the VET sector without a desirable quality-assurance system, TVET developed programs, advanced public-private partnerships (PPPs), and social awareness programs<sup>2</sup>.

Indeed, Qatar's National Vision 2030 (QNV2030) and the National Development Strategy 2011-2016 (NDS 2011-2016) have underscored the importance of vocational education for the population in the near future; however, several environmental forces and factors became renowned as a policy challenge as well as an operational obstacle. This paper, hence, diagnoses the most pressing challenges and provides a room for reformative approaches.

## **Research Question**

By reviewing the current educational policy in Qatar, certain policy implications and strategy challenges have been found valid. The research, therefore, is driven by questioning about *what sort of challenges would affect the effectiveness of VET Sector within a scope of national development strategies in Qatar*. As a subsequent to this leading question, more queries are embedded in the path of seeking a comprehensive understanding for this research's problem. More in depth, there is a consequent need to know *what gabs might result from these challenges*, and *how can the implications of VET challenges affect strategic planning of national strategies?*

## **Significance of Research**

---

<sup>1</sup> Qatar General Secretariat for Development Planning (QGSDP), *Qatar's National Development Strategy 2011-2016*, March 2011, 1st issue, p. iii, retrieved on 15/5/2012 from [www.gsdp.gov.qa](http://www.gsdp.gov.qa)

<sup>2</sup> Supreme Educational Council, *Education and Training Sector Strategy 2011-2016: Executive Summary*, p.22, retrieved on 02/12/2012 from [www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf](http://www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf)

The paper addresses an issue which is rarely studied on domestic or regional levels. VET is seen as an absent field of research in Qatar wherein few articles or studies have been made locally or globally to stress on contemporary challenges and issues related to VET institutions, programs, methodologies, objectives or structures in Qatar.

## **Methodology of Research**

The methodology of this research will be mainly qualitative with consideration to some quantitative practices. Therefore, this research uses inductive-grounded method that depends on exploration of variety of data and variables. The variables, therefore, are dependent variables represented by the environmental forces and factors affecting the VET system and sector from macro and micro levels, and an independent variable is represented by VET. Hence, due to the huge number of independent variables, the research has explored the most urgent and pressing ones. Thereunto, this paper attempts to present a systematic analysis for how the independent variables affect the dependent variables. In addition, this exploration aims at calling for further researching and studies due to the complexity and broadness of this topic.

The data collection, on the other hand, was based on secondary sources gathered from official statistical websites - and secondary data retrieved from blogs, reports, educational policies, national strategies, as well as earlier analyses of the most related national policies, strategies, journals, or even networks' blogs. The qualitative data, hereof, are diagnosed to explore the relationships of certain socio-political and economic variables. A systematic analysis was needed to reflect the complexity of the present condition of VET in order to provide possible answers to the current challenges and key issues. Hence, the historical-institutionalism analysis links the past with the current status of VET in Qatar, resulting in speculating possible future outcomes.

Besides, the interpretive technique of the data does not aim at testing the theoretical questions; rather, it is employed as hypothetical tool, to ascertain a range of variables that could be usefully employed in the analytical framework to help to diagnose the problem of research. Therefore, the research looks at comparative analysis of western models of VET and reasons of success or failure. Though, the significance of the comparative analysis is not interrogating the reasons of success, but to diagnose the common and regular VET challenges interrogated holistically. In addition, the comparative models will be visited to explore the plans and strategies in order to elaborate a more understanding for the purposefulness of the past and current strategies.

Eventually, this analytical framework will be able to inspect the VET system with interrogating the environment complexities, the interrelations of the components, and the measurements of success.

#### Limitation of this research:

There are not enough reports issued by VET institutions to explore or use in any institutional or systematic analysis. Besides, as there are no other statistics to compare to; the only accurate statistics are the ones retrieved from the official departments in Qatar. Hereof, there is validity predicament in which there are few studies or empirical findings and evaluations of training programs and institutions' reliability. In addition, the complicated nature of this topic makes it hard to quantify it. By looking at the variables from a holistic view, there are many of these variables; but there are no conclusive studies that specify the chain of causality of the independent variables to the dependent variable in this paper.

## **VET in the Literature**

In modern time, it was not until the sixties of the past century whereas training was seen as a national necessity and a civilization indicator. At the beginning of the 60s, Theodore Schultz, a noble price winner in economics, was amongst few pioneers who brought up to light the importance of VET in Human Capital industry. In his seminal book “Capital Formation in Education”, he proposed to consider education as a tangible investment in man referring it as *human capital*. He has seen that education became part of people once received in which it is more than being an institutional property. The value of education, hereinto, would be more depending on several issues that can be estimated empirically such as: the education outcomes and earnings as well as the cost of education. Additionally, he spots out the issue of negligence of the importance of VET in shaping the human capital in the labor market.

Followed by Schultz, many have investigated the effects on “earnings” while investing in Human Capital. As a milestone, Gary Becker, in his theoretical book “Investments in human capital: a theoretical analysis”, has examined the human capital activities, mainly VET, concluding that the concepts of human capital, skills and education are interchangeable. Thus, education is the core component of human capital. Nevertheless, Becker sees that investing in human capital is more likely intangible as it is more impetuous than tangible investments. In other words, it illustrates the effect of human capital on earnings, employment and other economic variables.

In this view, both scholars’ endeavors, as many other early scholars, were highly commended for clearing out the path to others to investigate human capital industry. Nevertheless, the tangibility of human capital left a margin for criticism, especially for the Neo-Marxists, wherein human capital was early seen as a physical laborious attribute rather than competence building. In other words, as education becomes part of human being, it does not necessarily mean that a labor must provide all of his skills rather than utilizing these skills based on work conditions and wages. Hereof, reliability, pluralism, and environment have not been questioned in human capital industry and their impact on training was not considerably considered.

Years later, the negligence of some of those issues became another area of study. In the view, the interrelation of other aspects with training and human capital was explored later on differently. Different distinctive perceptions about training started to emerge earlier in the eighties and the nineties trying to position training in the field of development.

Aurora Teixeira explored the linkages between the human capital and firm performance through approaching it from three interrelated perspectives:

technological, economic, and survival. She has noticed that four major issues are neglected which would advance the human capital in a firm and in the society accordingly. Those issues are pertaining to the skills' relationship and development, the changeable demands of human capital, the influence of social and institutional context, and the ability to survive in a competitive market. Hereof, VET is a fundamental part of building skills leading to advanced human capital, in which building skills needs tangible investments. Though, Aurora sees that VET and productivity are not in positive relation as this hypothesis is assumed rather than tested.

Lisa Lynch, on the other hand, examined the private sector and inferred that productivity and VET are in positive correlation. Yet, training programs experience several challenges and difficulties especially in the private sector. Therefore, the training outcomes might not meet the aspirations and the visions of the institutions. However, the significance of her studies in human capital, particularly "Private sector training and its impacts on the earnings of young workers", lies in its ability to highlight the major issues and aspects that intersect and overlap with VET as in employment conditions, growth, returns, and wages. Yet, as Aurora did, the role of management is shaping the impact of VET seemed as a missing aspect.

However, in his definitions of training, he provides a conjunction of the three elements with the time factor. Unfortunately, he falls short in defining the three elements according to time as he sees training as a current process, education as a future one and development as a process in-between. Hence, his approach is arguable as training and education have both features of present and future.

Other scholars such as Rosemary Harrison (2005) have studied the nature of training as a human development strategy for the employees. Rosemary has believed that training is an essential part of Human Resources Management (HRM); therefore, the relationship between the employer and the employees affect the human development process in the first place. Thereby, training can fortify the correlated relations and enhance the learning and development efficiency. Nevertheless, Harrison's scope was only pertaining to the professional field regardless of other possible sceneries of training such as the educational setting and any national visions or strategies.

Nevertheless, with the magnificent literature of VET as part of human capital management from the 60s to date, new trends emerged to investigate VET as part of development. It can be assumed that the reason behind this major shift is that VET impact and effect has been seen more and more from different dimensions within a scope of national development rather than individual. In fact, VET became a major key in defining and designing plans, strategies, and policies nationally and internationally, individually and institutionally. Yet, as

the key term "training" became more world-wide used, confusion of how to classify remained constant especially with the emergence of VET as a fundamental part of development studies.

Perhaps the most significant studies and contributions, herein, are related to the works of the European Centre for the Development of Vocational Training (CEDEFOD). It has examined several key areas and challenges of the European Union's national and institutional needs and challenges of VET, and considered it the backbone of any development plans and strategies.

In 1998, the CEDEFOD's report, "*Training for a Changing Society*", has illustrated the institutional and political background of VET systems in Europe, and has emphasized its socio-economic framework. In addition, it has explored the vocational choices and transitions, and the importance of VET to the disadvantaged groups as well as the modality and the curricula of VET. The significance of this report lies in providing a very fundamental overview of VET status at that time as well as the methodological and theoretical approaches illustrating the impact of VET over crucial issues such as unemployment, social marginalization, and markets' competitiveness. Many critical challenges have also been addressed in this report pertaining to the extension of the potential of human resources, the greater involvement of small and medium sized enterprises, the gap between qualifications and labor market requirements, the politics and recognition of VET, and many others.

Another vital report for CEDEFOD has highlighted the importance of quality assurance in vocational education and training, and the need for a supervisory role of governments. The 2009 report, *Accreditation & Quality Assurance in Vocational Education & Training*, finds out that the intensified cooperation between stakeholders has led to a range of complementary tools, the so-called common European tools for VET, which aims at shaping a proper European VET area in a field where legislative competence remains with the Member States. The report also sheds light on national and sectoral examples of accreditation in Germany, Ireland, Italy, Sweden and other countries. It also provides the challenges and the values of the quality assurance in VET in a European perspective.

During the years 2009-2011, CEDEFOD has published a series of reports pertaining to modernizing the VET systems in Europe in response to Copenhagen declaration, which underlines the contribution of VET to achieving Lisbon Summit (2000) goals. Lisbon Summit aimed at changing the EU economies into the most dynamic and competitive knowledge-based economy in the world, to secure more sustainable and stable economic growth and greater cohesion by 2010. This report, accordingly, issued for the purpose of exploring and reviewing the priorities and reforms made by the EU countries. Modernity

of VET systems, herewith, was addressed from two dimensions: the challenges of VET modernization (e.g. demographic, economic, social), and the most affecting trends (e.g. qualification frameworks, attractiveness of VET, guidance). Hereof, the report strengthens on the importance of good governance to tackle any issues and challenges.

With more focus on VET, many international events and joint studies took place seeking for better solutions and more advanced tools of education. One of the conferences was held in 2009 by Luxembourg Agency for Development Cooperation (Lux-Development) with association of German Technical Cooperation (gtz) and the French Agency of Development (afd) to discuss the key issues and challenges in assistance for vocational education. The proceedings of workshop for this conference highlight two common challenges of VET: the sustainable funding for sector, whose costs are higher than those of traditional education, and institutional reforms to improve the efficiency of vocational education.

Dr. Antje Barabasch and Prof. Dr. Felix Rauner, under the umbrella of UNESCO-UNEVOC, have provided a much more emphasis on the integration of the needs and requirements of work and education sectors in USA. This book titled "Work and Education in America: The Art of Integration" provides a magnificent analysis of the common dilemmas in the US vocational system as a model and converses several development, evaluation, and governance issues accordingly. The most significant and related part of this study is the comparative analysis of the VET system models of USA and Germany. Such comparison has revealed the shortcomings of the American VET model in comparison to the German one.

Finally, with the huge amount of literature written about VET, it can be noted that VET became gradually an intensive and rich material of study as more educational methods being discovered, and more factors and forces started to affect the desirable outcomes of VET on national and international levels. In fact, VET now is considered a crucial element in any development strategy or policy adopted nationally and internationally. Thus, this requires a more focus, exploration, and illumination to all players, stakeholders, challenges, gabs, and difficulties that emerge during the advancement of development policies and strategies especially those pertaining to education and training.

## Turbulent Demography and Labor Force

According to the third Qatari Human Development Report, five correlated challenges were observed and regarded as crucial in shaping the national development: demography and socio-economic condition of Qatar, namely VET opportunities and structures; labor force and economic diversification; health and wellbeing standards; and civic participation<sup>3</sup>.

Few decades earlier, between 1971 and 1995, Qatar was only regarded as a traditional Arabian country, with a typical Gulf economy, which depended on oil and gas exports; and a domestic culture derived from the Arabic and Bedouin traditions. It was not until 1995, when Sheikh Hamad became the Emir that Qatar transformed into a more modern and globally interactive country.

With huge, turbulent waves of incoming foreign expatriates since 1995, the population of Qatar was described as imbalanced and amongst the lowest “age-dependency ratios” in the world<sup>4</sup>. According to “the labor force bulletin of the year 2012”<sup>5</sup>, approximately 75% of the total population was employed. According to this source, despite only a small improvement in the number of Qataris in the total labor force, non-Qataris still constituted more than 90% of the total working population in 2011<sup>6</sup>. The monthly preliminary figures on population, issued by the Qatar Statistics Authority (QSA) on 31 March 2014, indicate a major wave of incoming expatriates between 2010 and 2014, resulting in a total population of **2,144,101** in 2014 (**1,597,403 males and 546,698 females**)<sup>7</sup>. This is a dramatic increase of more than 20% in only four years, compared to the 2010 population figures (1,760,389)<sup>8</sup>, which seem to lack corresponding strategies to accommodate this shift in the labor market, as well as the current demographic challenges.

Nevertheless, the reign of Sheikh Hamad was characterized by setting goals and objectives, aimed at aligning the labor force with new national economic strategies, so as to improve economic outcomes and enhance economic growth. In accordance with this viewpoint, Qatar considered employment and the workforce as two key elements in achieving economic growth and sustainable development. As such, the 1995 estimated gross domestic product (GDP) of \$8bn improved gradually to become the highest GDP per capita<sup>9</sup> in the world,

---

<sup>3</sup> GSDP, *Qatar's Third National Human Development Report. P Forward*, January 2012, Gulf Publishing & Printing Company.

<sup>4</sup> Qatar's Permanent Population Committee, *Qatar Population Status 2012*, p 18, October 2012, retrieved on 31 October 2013 from

[http://www.gsdp.gov.qa/portal/page/portal/ppc/PPC\\_home/ppc\\_news/ppc\\_files\\_upload/populations\\_status\\_2012\\_en.pdf](http://www.gsdp.gov.qa/portal/page/portal/ppc/PPC_home/ppc_news/ppc_files_upload/populations_status_2012_en.pdf)

<sup>5</sup> QSA, Employment to population ratio 2007-2012, Bulletin\_Labor\_Force 2012, 2012, QSA, [www.qsa.gov.qa](http://www.qsa.gov.qa)

<sup>6</sup> Op. cit. p 20.

<sup>7</sup> Qatar Statistics Authority, Population Structure, retrieved on 21 April 2014, from  
<http://www.qsa.gov.qa/Eng/PopulationStructure.htm>

<sup>8</sup> Qatar Statistics Authority, 2010 estimation, retrieved on 31 October 2013, from  
[http://www.qix.gov.qa/portal/page/portal/qix/subject\\_area?subject\\_area=177](http://www.qix.gov.qa/portal/page/portal/qix/subject_area?subject_area=177)

<sup>9</sup> GDP per capita, *The World Factbook*, CIA, retrieved on 25 October 2013 from  
<https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html>

with an estimated GDP of \$52bn<sup>10</sup>. According to current growth forecasts, growth for the next five years is estimated to be between 7% and 10%<sup>11</sup>.

In addition, Qatar started to focus on diversifying its economy via both domestic and international investments. For instance, the Qatar Investment Authority (QIA), which is Qatar's main governmental investment organization, took major steps to diversify the economy. It considered the economic crisis as an investment opportunity, which could be utilized to diversify its economic resources, in order to show more sustainable and enduring economic growth.

In this regard, the authorities announced major measures to develop a non-hydrocarbon economy, including the improvement of small and medium size enterprises, founding the Qatar Financial Center, enhancing Qatari international brands (e.g. Qatar Airways), investing in energy-intensive industries, as well as in research and development (R&D) organizations, and establishing first-class educational institutions<sup>12</sup>.

This remarkable economic growth affected the status of the workforce, as well as employment in Qatar. Qatar achieved a highly desired unemployment rate of less than 1%<sup>13</sup>, driving the workforce to assist with building the economy and achieving a secured future. Nevertheless, Figure 1.1 indicates the necessity of additional vocational education on the regular ladder of degrees, so as to address the issue of absorbing less skillful and lower qualified employees in both the public and private sector, but more especially the private sector, in order to achieve even lower unemployment figures.

**Figure 1**

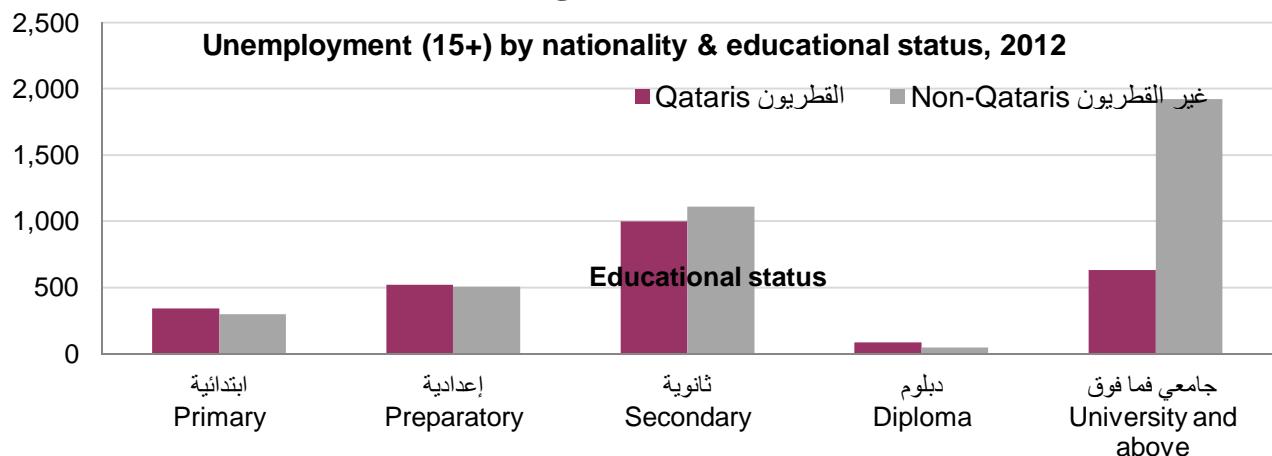


Figure 1<sup>14</sup>

However, since 1995, a considerable amount of strategic change took place, affecting Qatar's demography and labor market and contributing more in increasing the economic growth and development rates. One of these strategies

<sup>10</sup> Op. cit.

<sup>11</sup> Qatar Investment Authority website, retrieved on 26 October 2013 from <http://www.qia.qa/about.html>

<sup>12</sup> Qatar Investment Authority website, retrieved on 26 October 2013 from <http://www.qia.qa/about.html>

<sup>13</sup> The Peninsula Qatari Newspaper, *State key employer of Qataris: Country has lowest unemployment rate in the world.* The Peninsula, p. 1, 31 October 2013. Issue No. 5869, Volume 18.

<sup>14</sup> QSA. Unemployment (15+) by nationality & educational status. QSA, October 2012, Gr .9. [www.qsa.gov.qa](http://www.qsa.gov.qa)

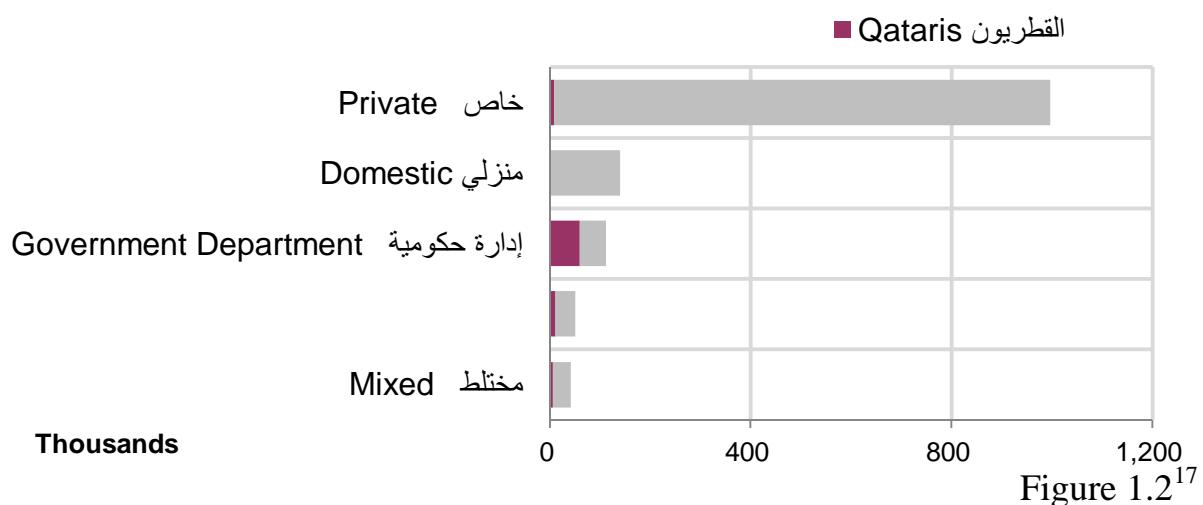
was to increase the number of Qataris involved in the private sector labor market.

In fact, Qatari involvement in the private sector represents a recent challenge that emerged and became an issue to be addressed by policy-makers. Since then, the general tendency for Qataris to work in the public sector rather than in the private has escalated to become a national issue. Qatar's Ministry of Labor has raised this issue recently and, amongst the 29,788 Qatari citizens who entered the labor market between 2007 and 2013, only 7,283 joined the private sector – i.e. 25%<sup>15</sup>. Qatar's Ministries of Labor and Planning attributed this issue to the low pay-scales in the private sector and the level of education attained by Qataris, as indicated in Figure 1.1<sup>16</sup>.

The following graph illustrates the current gap between the private sector and the public sector in terms of Qatari citizens' involvement:

**Figure 2**

### Economically active population by nationality & sector: 2012



According to this information, Qataris seem to avoid getting involved in the private sector. This tendency can be attributed to the fact that the benefits and salaries offered by the public sector are much greater than those of the private sector. Therefore, attention should be drawn to the vital necessity to attract Qatari citizens to the private sector, in order to achieve a more balanced labor market – especially with people's income-based interest in working for government departments.

Therefore, the current status of employment and the labor force reflects a need for more compatible skills and qualifications. The efficiency of any labor force is closely related with the kind of skills and knowledge built via two processes,

<sup>15</sup> The Peninsula Qatari Newspaper. *State key employer of Qataris: Country has lowest unemployment rate in the world.* The Peninsula, p 1, 31 October 2013, Issue No. 5869, Volume 18.

<sup>16</sup> Op. cit.

<sup>17</sup> QSA. Economically active population by nationality & sector: 2012. October 2012, Gr .5, QSA. [www.qsa.gov.qa](http://www.qsa.gov.qa)

namely learning and practising. The practising process could be described as an auto-generated outcome resulting from daily work-related activities and experience, which could be affected by different factors and forces, such as the working environment, culture, ethics and many others.

In Qatar, foreign workers are typically being recruited for their efficient skills and outstanding expertise. This leaves only a small margin for Qataris to compete in the labor market and especially in the private sector, despite the fact that the Qatari Government has launched policies and strategies that enhance Qatari recruitment in the private sector (i.e. Qatarization Policy<sup>18</sup>). Nevertheless, a more appropriate strategy would be to focus on more VET programs, specifically tailored to suit the nature of the Qatari labor market and aimed at enhancing the Qatarization Policy<sup>19</sup>.

## Significant Transformation

In a growing society, such in the case of Qatar, personal and corporate achievement takes first priority for the decision-makers of this country. Undeniably, great achievements were steadily reached since Sheikh Hamad Al-Thani had become the Emir in 1995. Yet, the most transformational step was creating a unique national vision that would unify the dreams and ambitions towards greater achievements. Qatar's National Vision, referred to as "QNV 2030<sup>20</sup>", evolved later as a vital and destined decision, defining a clear development path and an optimal goal of placing Qatar amongst the advanced countries of the world. This transformational phase was launched in July 2008, by Sheikh Tamim Al-Thani, to be the first of its kind, pursuing the transformation of a nation from being a developing country to an advanced country. In this regard, Sheikh Tamim said:

*Qatar's National Vision is authentic. It has emerged from intensive consultation across Qatari society. It is based on the guiding principles of Qatar's Permanent Constitution. It reflects the aspirations of the Qatari people and the resolve of their political leadership.*

*Qatar's National Vision belongs to the government, the private sector, civil society and to all Qatari citizens. I call on all to work hard and utilize your expertise to help achieve the goals of the Vision and to advance our nation's development. In this way, we will build a bright future for the people of Qatar.<sup>21</sup>*

---

<sup>18</sup> A policy implemented by the Qatari Government, whereby all private and public companies have to recruit specific numbers of Qataris in accordance with specific ratios and rates, prepared and set accordingly. However, due to increasing needs and demands for more skills and qualified staff, the Qatarization Policy encounters huge resistance from both the public and private sector, as it does not completely satisfy the needs and the demands of the labor market.

<sup>19</sup> According to a study conducted by the Qatar Foundation Social Development Center, retrieved from an article by the Al-Arab Qatari Newspaper on 18/11/2013. The article is dated 01/09/2013, No. 9212.

<sup>20</sup> Qatar National Vision 2030 (QNV2030)

<sup>21</sup> GSDP. *Qatar National Vision 2030*, July 2008. GSDP, first edition, preface page, retrieved on 03/11/2013 from [www2.gsdp.gov.qa/www1\\_docs/QNV2030\\_English\\_v2.pdf](http://www2.gsdp.gov.qa/www1_docs/QNV2030_English_v2.pdf)

QNV 2030 presents five key challenges that Qatar encounters regularly. The first challenge pertains to modernizing society, while retaining the Qatari culture and traditions. The second challenge pertains to balancing the needs of the present generation with future needs. The third challenge is concerned with managing economic growth while avoiding uncontrolled growth. The fourth challenge is concerned with matching the volume and the quality of the non-Qatari labor force with the requirements of the selected path of development. The fifth and final challenge is to align economic growth with social development and the environment<sup>22</sup>.

In parallel, as development became the top priority, education became the key element in all national strategies. It was even highlighted in QNV 2030 that one of the basic pillars of social progress was education and excellent training; which should eventually result in greater success in building the potential and sharpening the skills of people<sup>23</sup>. Therefore, QNV 2030 targeted VET as a pillar that will uphold a comprehensive and integrated education, which has spanned three educational sectors, namely general education, higher education and vocational education and training (VET). While each sector has a distinct identity, mission and function, the sectors needed to operate within an overarching framework that embodied policy-related principles. Yet, VET still needs to establish stronger links with Qatar's labor market<sup>24</sup>.

Therefore, QNV 2030 set specific goals and outcomes to be achieved by 2030, as part of its targeted human development outcomes. Those goals are aimed at developing a more educated nation, placed amongst the most advanced nations in the world. Thus, QNV 2030 set a strategy for targeted, comprehensive and integrated education, elaborated upon in the four main goals<sup>25</sup>.

The first goal is to create a professional educational system, designed to enable the citizens of Qatar to enable them to achieve their personal and societal goals. This exercise entailed the compilation of responsive educational curricula and training programs that meet the needs and requirements of the present, as well as the future labor market; more training and education opportunities to suit the individualistic responsibilities and aspirations of these programs; as well as utmost accessibility to life-long learning programs.

The second goal is to establish a national network of official and informal educational programs that would enhance the skills and capabilities of the Qatari children and youth to contribute more to their society via national and social networking. This also entailed a summarized version of Qatari cultural values, ethics and heritage; a strong sense of belonging, pertinence and citizenship; innovation and creativity; as well as the participation of cultural and sporting activities.

---

<sup>22</sup> GSDP. *Qatar's Third National Human Development Report*, p 6, January 2012. Gulf Publishing & Printing Company.

<sup>23</sup> GSDP. *Qatar's National Vision 2030*, July 2008. GSDP. First edition, p 13, retrieved on 03/11/2013 from [www2.gsdp.gov.qa/www1\\_docs/QNV2030\\_English\\_v2.pdf](http://www2.gsdp.gov.qa/www1_docs/QNV2030_English_v2.pdf)

<sup>24</sup> *Qatar National Development Strategy* by the GSDP, First published in March 2011: [http://www.gsdp.gov.qa/gsdp\\_vision/docs/NDS\\_EN.pdf](http://www.gsdp.gov.qa/gsdp_vision/docs/NDS_EN.pdf)

<sup>25</sup> Op. cit. p. 16.

The third goal, on the other hand, is to have well developed, independent, self-managing and accountable educational institutions, operating under the auspices of centrally determined guidelines.

The fourth goal is to fund scientific research by both the private and public sector via an efficient finance system, collaborating with the most prominent organizations and international institutes.

However, as a world-class educational system could be a national goal, it could also become a medium for a more capable and motivated workforce. The QNV 2030 elaborates on the importance of an excellent educational and training system by setting more workforce-based goals<sup>26</sup>.

The first goal is to diversify and improve the participation of Qataris in the workforce by having more public and private institutions investing in certification and VET programs; more Qataris to play professional and managerial roles in business, health and education while creating more incentives; world-class and supreme training programs for all Qatari citizens that meet their expectations, desires, ambitions and abilities; and more support for Qatari women in general, by creating more vocational opportunities for them.

The second goal focuses on filtering the participation of the expatriate labor force. This entailed choosing the best mix of the expatriate labor for recruitment; protecting their rights; securing their safety; and retaining the outstanding performers.

Hence, taking into consideration that QNV 2030 is a long-term strategy, several short-term strategies were designed to achieve the ultimate Vision of 2030. The National Development Strategy 2011-2016, for instance, designed as a five-year-strategy, aimed at fulfilling short-term outcomes that could enhance the development of the QNV 2030 scope. With this in mind, the Qatar national strategies entail several key issues that might affect the desirable outcomes of QNV 2030.

Looking at these goals and strategies, different needs and challenges could immediately be identified. Unsurprisingly, it could be proposed that the key issue amongst these goals is the deemed need for well-organized, efficient and more contributing institutions in both the public and the private sector. This inductive notion comes from the fact that, achieving the set goals in terms of an improved education and workforce, would definitely require powerful institutional solutions, as well as an efficient monitoring and supervisory umbrella body.

---

<sup>26</sup> Qatar's National Development Strategy by GSDP, p. 18. First published in March 2011.  
[http://www.gsdp.gov.qa/gsdp\\_vision/docs/NDS\\_EN.pdf](http://www.gsdp.gov.qa/gsdp_vision/docs/NDS_EN.pdf)

## Unsustainable VET Policy

In 2001/2002, the Ministry of Education's public schools serviced about 100,000 students and two-thirds of those who attended were financed and guided by government. But extensive weaknesses existed in the educational system, which were caused by many reasons and factors. According to the Rand-Qatar Policy Institute, there was no vision of quality education; the curriculum was obsolete and unchallenged under the rigid control of the Ministry, which emphasized rote memorization; and there was a lack of vocational preparation.<sup>27</sup>

Qatar's Supreme Education Council (SEC) was established in 2002 to address these issues and improve the educational system in Qatar. Two years later independent schools were proposed as the solution to the problems faced. SEC became the leading supervisory educational entity in Qatar, carrying the responsibility of observing, monitoring, improving and supervising Qatar's educational system and replacing the former Ministry of Education.<sup>28</sup>.

The Education and Training Sector (ETS) Strategy 2011-2016 was developed later to improve accessibility of educational and training opportunities that were consistent with the Qatar citizens' abilities and interests. Consequently, this should enhance participation in the workforce and endorse citizenship values and association patterns<sup>29</sup>. However, the progress of the current education success depends increasingly on Qatar's ability to compete at international level in a knowledge-based economy and to diversify the economy in future. In this regard, Mr Saad Al-Mahmoud, Minister of Education and Higher Education and Secretary-General of the SEC, emphasized the correlation between VET and development:

*Thus, the education and training of Qataris will be extremely important to continue to progress and prosperity. The State of Qatar will benefit from all the advantages of education in both the economic and social domains.*<sup>30</sup>

In parallel, the National Development Strategy (NDS) divided development projects into 14 sectors, including a sector for VET, for which the NDS set 21 key outcomes, based upon expectations pertaining to the next few decades<sup>31</sup>. As mandated by the NDS, the SEC therefore has the chief responsibility of defining the education and training components, so as to focus on aligning its strategies with national strategies. Figure 1.3<sup>32</sup> indicates the SEC's role in shaping and influencing the outcomes of QNV 2030 from a public policy perspective.

---

<sup>27</sup> *Education for a New Era: Design and Implementation of K-12 Education Reform in Qatar*, xviii. Dominic J Brewer et al. RAND-Qatar Policy Institute, ISBN-13: 978-0-8830-4007-7.

<sup>28</sup> Op. cit.

<sup>29</sup> Supreme Education Council (SEC), *Education & Training Sector Strategy 2011-2016: Executive Summary*, 2011, p. 6, retrieved on 05/11/2013 from <http://www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf>

<sup>30</sup> SEC, *Education and Training Sector Strategy 2011-2016: Executive Summary*, 2011, foreword, retrieved on 05/11/2013 from <http://www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf>

<sup>31</sup> Supreme Education Council, *Education and Training Sector Strategy 2011-2016: Executive Summary*, 2011, retrieved on 05/11/2013 from <http://www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf>

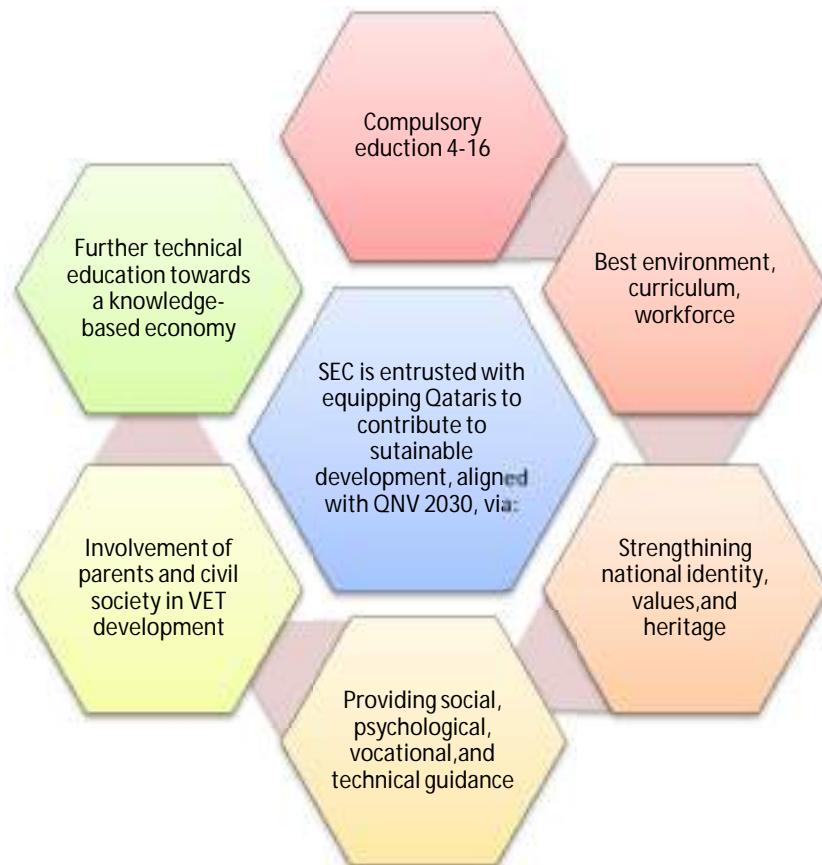
<sup>32</sup> Op. cit. pp. 6&7.

**Figure 3**



On the other hand, following consultation with other educational institutions and societal players in Qatar, ETS, represented by the SEC, designed a strategy, starting from an early age to after-school-going age, which can be illustrated as follows<sup>33</sup>:

**Figure 4**



<sup>33</sup> Supreme Education Council, *Education & Training Sector Strategy 2011-2016: Executive Summary*, 2011, pp. 10 & 11, retrieved on 05/11/2013 from <http://www.sec.gov.qa/En/about/Documents/Stratgy2012E.pdf>

However, in order to develop the educational system and address any possible shortcomings in each educational phase, a new policy program was launched by the ETS and supervised by the SEC<sup>34</sup>. Eight outcomes were set for the program, which became known as *Core and Cross-cutting Education and Training*<sup>35&36</sup>. These outcomes were fortified with a considerable number of enhancing projects, constituting as an action plan. The projects were designed to establish a national information database, short-term inclusiveness and efficiency strategies, diversified cultural programs, as well as to lay the foundation for well-established VET institutions<sup>37</sup>.

There is, however, a crucial deficit in this designed policy program, caused by the absence of continuous follow-up on, and comprehensive supervision of running projects, programs, strategies and even institutions. This policy, as well as other related educational policies and strategies do not highlight the supervisory role of any governmental organization to accept responsibility for VET strategies and the implementation of policies.

Coming back to the SEC as the key organization responsible for education in Qatar, the SEC is considered as the common bond that links all designed national visions and strategies (NDS, QNV, ETS, etc.). The SEC was established in 2002, hence, with a vision of fulfilling the needs of the State of Qatar by producing more capable and skilled human resources. As the responsible body for education in Qatar, the SEC became the only organization in charge of setting national education policy and linking it with the state's national vision<sup>38</sup>. It supervises three subordinate institutions, namely the Education Institute, the Evaluation Institute and the Higher Education Institute.

The Education Institute pursues world-class education of quality by providing more educational alternatives, promoting creativity and striving for excellence. It is responsible for all financial allocations and licenses of schools in Qatar, as well as standardization and curriculum development<sup>39</sup>. The second institute, the

---

<sup>34</sup> Op. cit. p.10

<sup>35</sup> See *Core & Cross-cutting Education & Training Program*, as well as outcomes and development projects in Appendix 1. Retrieved from *Education & Training Sector Strategy 2011-2016: Executive Summary*, 2011, pp 12 & 13, retrieved on 05/11/2013 from <http://www.sec.gov.qa/En/about/Documents/Stragy2012E.pdf>

<sup>36</sup>The outcomes were centred around developing comprehensive strategic plans for the education and training sector; to enhance VET public policy; add cultural value; improve professional and institutional development; enhance Information and Communications Technology (ICT) and learner motivation; improve VET accessibility; as well as advancing the National Standards and Qualifications Framework.

<sup>37</sup> Op. cit. pp 12-15.

<sup>38</sup> The Supreme Education Council (SEC) website's "About Page", retrieved on 7/11/2013 from <http://www.sec.gov.qa/En/about/Pages/default.aspx>

<sup>39</sup> See SEC website <http://www.sec.gov.qa/En/SECInstitutes/EducationInstitute/Pages/AboutInstitue.aspx>

Evaluation Institute has two primary roles, namely school performance supervision and school evaluation<sup>40</sup>.

On the other hand, the Higher Education Institute is responsible for securing higher education and vocational training opportunities, following k-12 schooling. It is in charge of providing training center licenses, as well as for the accreditation of the SEC. However, it does not have unified training standards or requirements in terms of training programs. In addition, the supervisory and evolutionary role of this institute does not seem all that solid. People who seek vocational education and training are faced with a lack of data on VET institutions, as there are no transparent evaluations, rankings or observations presented on their website or in their periodicals<sup>41</sup>.

Inductively, the controversy about the efficiency of SEC vocational education and training can be clearly observed. The evaluating and supervisory role of the SEC with regard to VET institutions, is somewhat absent, despite the fact that it grants licenses to these institutions for providing VET services. In addition, there is no valid analysis of the current VET outputs and their compatibility with national strategies outcomes – especially the fact that the number of students who join private sector VET institutions is increasing annually (33% increase between 2009 and 2011)<sup>42</sup>.

## A Scope of Environmental Challenges

Utilizing visualization, the manifestation of the correlated components of VET's educational policy reveals some crucial issues and questions to be answered by policy-makers and state officials. Some of these issues pertain to the role played by government in interacting with the VET outcomes; the relationship between the private sector and public sector and the subsequent influence on VET; the way in which this educational policy is weighed and assessed; as well as the influence of the labor market on the VET Sector's requirements and government's perspective of VET. The analysis to follow will attempt to answer some of those questions by addressing the major macro and micro-challenges.

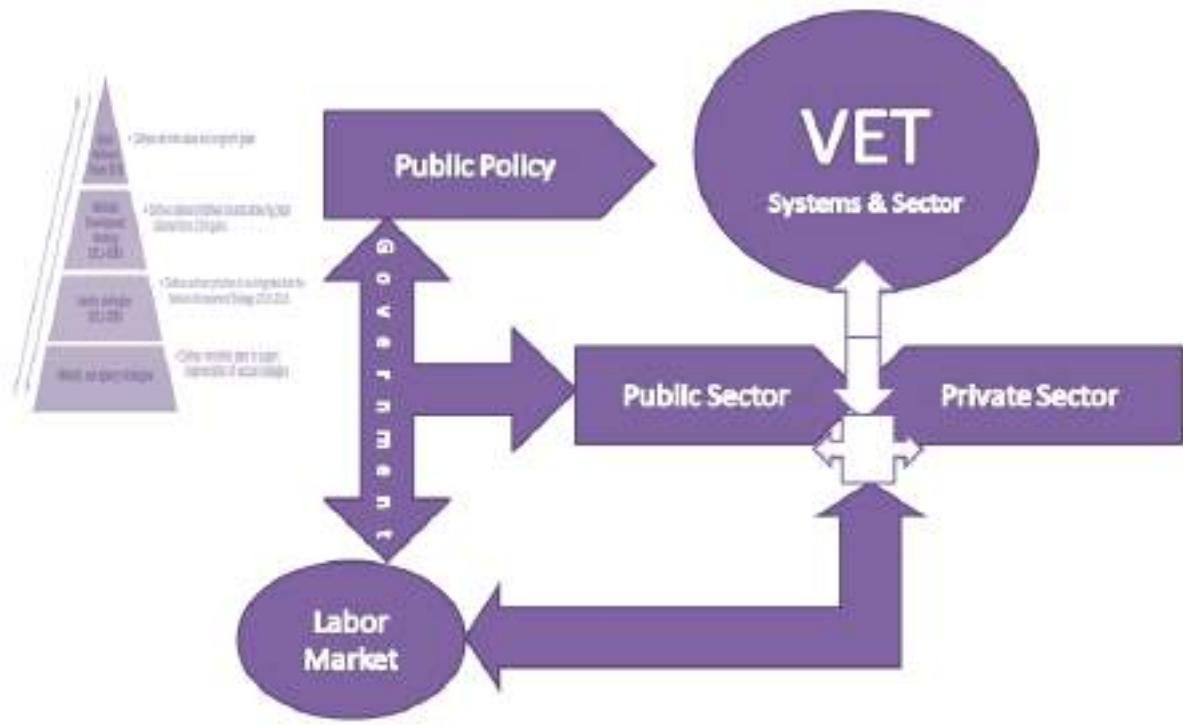
## Figure 5

---

<sup>40</sup> It comprises four main offices: the Student Assessment Office, School Evaluation Office, Data Collection Office and the Registration Office.

<sup>41</sup> See SEC website <http://www.sec.gov.qa/Ar/ServicesCenter/Pages/authorizedtrainingcenters.aspx>

<sup>42</sup> Permanent Population Committee, *Qatar Population Status 2012*, Oct 2012, p 40, [www.gsdp.gov.qa](http://www.gsdp.gov.qa)



By exploring the earlier indicators of Qatar's demography, labor market and national strategies, several VET challenges were observed accordingly. Herein, the following two diagrams represent an attempt to visualize the scope of the challenges facing Qatar from a more holistic and correlative point of view. They indicate the levels of the forces and factors affecting Qatar's VET Systems and VET Sector from both a macro and micro-environmental level. They also indicate an integrative view of the interrelations between the fundamental components of VET as VET's Sector is composed of several VET systems.

**Figure 6**

**Micro-environment**



**Macro-environment**



As Qatar's National Vision 2030 underlines the significance of VET in achieving the goals of the vision, some of the key challenges, which manifested earlier, have also been highlighted by the vision<sup>43</sup>. Nevertheless, the correlation between the challenges and the potential effects was not regarded as part of national strategies in Qatar. Therefore, there is a huge need for intensive exploration for the major environmental forces in order to revisit the missions, plans, strategies and policy cycles, and in order to examine the effects of the current outcomes on the loop of educational policy. Besides, there is a great need to understand the scope of the current challenges from a more holistic view, so as to revise the components of the policies and analyze the interrelationship of micro and macro-environmental challenges.

## **Qatar's Micro-environmental Challenges**

As discussed in the previous chapter, there are many micro-forces and factors that affect VET. These are related to the administrative and institutional mutual influence, in which VET is either affecting or affected by the type of the institutionalized administrative processes, policies, operations, plans, standards and permeability. As is the case in the Western world, the VET System and Sector in Qatar are facing many challenges, due to some implications observed on two environmental levels, namely macro and micro. Therefore, this part of the discussion is exploring recent statistics to provide statistical evidence of the extent of the influence of the most pressing micro-forces, namely institutional, administrative, marketing, competition, publics, learners and suppliers.

Looking at current statistics, the management of VET institutions in Qatar seems to lack sufficient responsibility towards the labor market and a realistic understanding of the VET investment opportunities in Qatar. This hypothesis has manifested itself from several alarming indicators that should have been addressed by the management of the training institutions in Qatar but which unfortunately seem to have been ignored.

One of these indicators is the relatively large number of VET institutions in Qatar. According to the Qatar Statistics Authority, there were 88 training centers in Qatar in 2012; 10 were government institutions, nine were semi-government institutions and 69 were private institutions<sup>44</sup>. The fierce competition over a relatively small number of trainees inside Qatar results in various financial problems related to the costs of running the institutions and, more in particular, the private institutions, as the table below indicates.

---

<sup>43</sup> See Page 18 – “Transformational Phase: The vision”

<sup>44</sup> QSA, *Trainees by nationality & gender & type of training agency* 2012, Table 1, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

**Table 1**

| Training Agency                | Number of Trainers |     | Number of Training Programs | Number of Centers | Nationality              |        |             |        |         |        |  |  |
|--------------------------------|--------------------|-----|-----------------------------|-------------------|--------------------------|--------|-------------|--------|---------|--------|--|--|
|                                |                    |     |                             |                   | Total Number of Trainees |        | Non-Qataris |        | Qataris |        |  |  |
|                                | F                  | M   |                             |                   | F                        | M      | F           | M      | F       | M      |  |  |
| Gov. Ministries & Corporations | 33                 | 242 | 1,469                       | 10                | 10,871                   | 21,966 | 2,780       | 12,804 | 8,091   | 9,162  |  |  |
| Semi-gov. Corporations         | 23                 | 26  | 1,412                       | 9                 | 1,499                    | 8,785  | 761         | 8,032  | 738     | 753    |  |  |
| Private Training Centers       | 167                | 250 | 598                         | 69                | 16,847                   | 10,339 | 7,628       | 6,096  | 9,219   | 4,243  |  |  |
| Total                          | 223                | 518 | 3,479                       | 88                | 29,217                   | 41,090 | 11,169      | 26,932 | 18,048  | 14,158 |  |  |

*Trainees by nationality & gender & type of training agency 2012, Table 1<sup>45</sup>*

Despite the absence of the type of trainees and other details, this table still indicates crucial issues and institutional challenges. On a micro-level, one of these crucial and alarming issues is the discordancy of the number of the training centers with the number of the trainees in the Qatari VET Sector. The total number of trainees who attended government training institutions is more than those who attended private institutions, despite the fact that the number of private institutions is seven times higher than the government institutions. Therefore, in essence, this results in lower revenue and the limitation of the financial resources for private institutions, of which the administrations seem to lack a proper understanding of both the feasibility of their investments and of the current demands and needs of the labor market.

Besides, in the case of Qatar, training providers would argue that it is very costly to provide efficient training services, especially as Qatar could be considered a thin market of VET<sup>46</sup>. In other words, while the government and the semi-government institutions are financially secure because of official support, the private institutions struggle to survive in a market witnessing small changes in supply and demand, as well as high volatility – as the VET market in Qatar illustrates. Hence, what would be the reasons for this low involvement rate of trainees in private institutions' programs and services?

As the above table indicates, one possible reason is the relatively narrow variety of training programs provided by private institutions, as explained

<sup>45</sup> Op. cit.

<sup>46</sup> Fran Ferrier, Tom Dumbrell and Gerald Burke, *Vocational Education and Training: Providers in Competitive Training Markets*, p 30, NCVER, Australian Government Publication, 2008.

earlier. The number of the training programs offered by the 69 private institutions in 2012 was 598, which was less than half of what the 10 government institutions offered in the same year (1,469). This indicates a poor response by private institutions towards market needs and demands; fewer opportunities to earn revenue; the inadequate role played by marketing intermediaries to promote the VET programs; and the insufficient role of R&D in those institutions with regard to updating and developing the existing offerings.

Another possible reason is government's financial support for those training institutions, resulting in embedded lower tuition fees for enrolled learners. This attracts more potential trainees to government institutions and drives them away from private institutions, which typically charge more. Therefore, in order to participate in this fierce competition between private and government institutions, private institutions have to provide other training opportunities to the trainees in Qatar. In other words, the management of private institutions has to find more innovative and distinctive programs in order to compete and thus attract more potential learners.

According to the National Center for Vocational Education Research (NCVER), in the fierce competition between VET institutions, the institutions tend to adopt specific measures and strategies. Some of these measures and strategies are tailored to address the issue of how to penetrate the market effectively, as well as how to form successful partnerships and alliances. In other words, those measures should enable them to segment the market, expand their resources to include more services and activities, reduce costs, distinguish themselves from competitors and offer more innovative and pioneering services and offerings<sup>47</sup>.

*To overcome barriers to participation and success in some markets ... they are forming alliances with partners able to provide assistance with marketing, seeking referrals from existing clients and maintaining close relationships with potential clients<sup>48</sup>.*

However, thus far, it seems that the management of those institutions has no realistic understanding of the market needs and demands for VET in Qatar. There are no clear indications that the VET institutions are sufficiently responsive to the demands of the market. For instance, many trainers and instructors complained publicly about the lack of clarity in the criteria and procedures to attain vocational certification, as well as about the poor offerings from VET institutions<sup>49</sup>. In addition, they complained about the inefficiency and bureaucracy of the administrators in charge of enrolment and certification, and criticized the disincentives of private institutions, especially with regard to many administrative barriers, such as a circular from the SEC that prohibits any dealing with them without prior approval.

---

<sup>47</sup> Op cit., p 9.

<sup>48</sup> Op. cit. p 9.

<sup>49</sup> Al-Rayah Qatari Newspaper, Mohamed Hafith, Issue No. 88146, dated 10/04/2013, retrieved on 20/01/2014 from <http://newsqa.net/detail88146.html>

Besides, according to the SEC, there are three main VET domains in Qatar, namely administration, languages and computers. In addition, there are 81 public and private centers that provide administrative training, 24 computer centers and 32 language centers<sup>50</sup>. Both private and government institutions provide training in those domains, but only government and semi-government institutions provide training in other VET domains that are related to the needs and demands of the labor market and the Qatari economy. The two tables below indicate the major difference between the private and government institutions offerings.

**Table 2**

| Trainees at government, semi-government and private training centers in 2012 <sup>51</sup> |                       | Trainees at government and semi-government centers in 2012 <sup>52</sup> |                       |
|--------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------------------------------|-----------------------|
| Type Of Training Domain                                                                    | Total No. of Trainees | Type Of Training Domain                                                  | Total No. of Trainees |
| Administrative                                                                             | 29,495                | Administrative                                                           | 16,149                |
| English Language                                                                           | 7,673                 | English Language                                                         | 1,974                 |
| Information Technology                                                                     | 11,075                | Information Technology                                                   | 2,934                 |
| Communication Technology                                                                   | 408                   | Communication Technology                                                 | 408                   |
| Law                                                                                        | 323                   | Law                                                                      | 323                   |
| Training of Teachers                                                                       | 3,071                 | Training of Teachers                                                     | 3,071                 |
| Functional Rehabilitation                                                                  | 280                   | Functional Rehabilitation                                                | 280                   |
| Oil & Gas                                                                                  | 6,333                 | Oil & Gas                                                                | 6,333                 |
| Mining                                                                                     | 4,779                 | Mining                                                                   | 4,779                 |
| Petrochemical Industries                                                                   | 466                   | Petrochemical Industries                                                 | 466                   |

<sup>50</sup> See the SEC Higher Education Institute statistics of 2011/2012, retrieved on 12/01/2014 from [www.sec.gov.qa/hei/HEI\\_centers2.xls](http://www.sec.gov.qa/hei/HEI_centers2.xls)

<sup>51</sup> See QSA, *Trainees by nationality & gender & type of training agency 2012*, Table 2, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

<sup>52</sup> See QSA, *Trainees by nationality & gender & type of training agency 2012*, Table 3, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

|                                             |               |                                             |               |
|---------------------------------------------|---------------|---------------------------------------------|---------------|
| <b>Banking Operations</b>                   | 1,197         | <b>Banking Operations</b>                   | 1,197         |
| <b>Scientific Sessions<br/>(young)</b>      | 693           | <b>Scientific Sessions<br/>(young)</b>      | 693           |
| <b>Occupational Safety<br/>and Security</b> | 4,173         | <b>Occupational Safety<br/>and Security</b> | 4,173         |
| <b>Manual Occupations</b>                   | 341           | <b>Manual Occupations</b>                   | 341           |
| <b>Total</b>                                | <b>70,307</b> | <b>Total</b>                                | <b>43,121</b> |

As can be observed by comparing the two tables above, private VET institutions in Qatar narrowed their services to only three domains, namely Languages, IT and Business. This resulted in their offerings being less attractive and it does not comply with the needs for vocational skills in the labor market.

This also affected the financial resources of the institutions, as the segments of the trainees became smaller, which eventually affected the institutions' development plans. The latter include the improvement of their training programs, the quality of their trainers and administrative staff members and their level of responsiveness to any changes or new trends in the labor market. In other words, government and the semi-government institutions are financially secure, owing to the official support they receive, but private institutions struggle to survive in a market witnessing low liquidity, high spreads, small changes in supply and demand, as well as high volatility, which can all be observed in Qatar's VET market.

This failure in understanding Qatar's VET market could be mainly attributed to the incompetent administration of those institutions, which insisted on entering into severe competition with more than 60 other private institutions over small segments of trainees who are not entitled to attend free courses by government institutions, due to the nature of their work and their sector of work. Besides, unlike the German VET System, which is reasonably well aligned with the demands of the labor market<sup>53</sup>, the above table indicates the lack of responsiveness on the part of private institutions to the needs and the demands of the labor market in Qatar. This can be seen from the restricted variety of skills training provided, which creates a developmental gap and results in a heavy burden on the performance of the government institutions. In addition, it shows the less attractive offerings by private institutions – especially with regard to those people who are unemployed or looking for better opportunities.

The following table indicates the relatively small number of trainees in private institutions, who represent the only financial resources of those institutions, as well as the limited domains offered by private institutions.

---

<sup>53</sup> Prof. Antje Barabasch & Prof. Felix Rauner, *Work and Education in America: The Art of Integration*, p 78, Vol. 1, 2012, Springer Publications.

**Table 3**

**Trainees at private training centers according to their employment status, nationality, gender and field of training: 2012<sup>54</sup>**

| Field of Training     | Nationality | الحالة العملية<br>Employment Status |                 |               |                                     |                 |               |                              |                 |               |
|-----------------------|-------------|-------------------------------------|-----------------|---------------|-------------------------------------|-----------------|---------------|------------------------------|-----------------|---------------|
|                       |             | الاجمالي<br>Total                   |                 |               | الذين ليس لديهم عمل<br>Without Jobs |                 |               | الذين لديهم عمل<br>With Jobs |                 |               |
|                       |             | مجموع<br>Total                      | إناث<br>Females | ذكور<br>Males | مجموع<br>Total                      | إناث<br>Females | ذكور<br>Males | مجموع<br>Total               | إناث<br>Females | ذكور<br>Males |
| <b>Administration</b> | Qatari      | 7,526                               | 5,615           | 1,911         | 953                                 | 616             | 337           | 6,573                        | 4,999           | 1,574         |
|                       | Non-Qatari  | 5,820                               | 3,180           | 2,640         | 690                                 | 418             | 272           | 5,130                        | 2,762           | 2,368         |
| <b>Computers</b>      | Qatari      | 2,851                               | 1,827           | 1,024         | 743                                 | 523             | 220           | 2,108                        | 1,304           | 804           |
|                       | Non-Qatari  | 5,290                               | 2,956           | 2,334         | 981                                 | 523             | 458           | 4,309                        | 2,433           | 1,876         |
| <b>Languages</b>      | Qatari      | 3,085                               | 1,777           | 1,308         | 1,247                               | 747             | 500           | 1,838                        | 1,030           | 808           |
|                       | Non-Qatari  | 2,614                               | 1,492           | 1,122         | 1,022                               | 603             | 419           | 1,592                        | 889             | 703           |
| <b>Total</b>          | Qatari      | 13,462                              | 9,219           | 4,243         | 2,943                               | 1,886           | 1,057         | 10,519                       | 7,333           | 3,186         |
|                       | Non-Qatari  | 13,724                              | 7,628           | 6,096         | 2,693                               | 1,544           | 1,149         | 11,031                       | 6,084           | 4,947         |
|                       | Total       | 27,186                              | 16,847          | 10,339        | 5,636                               | 3,430           | 2,206         | 21,550                       | 13,417          | 8,133         |

As it stands, the limited financial resources of private institutions will also affect the future development plans of those institutions, including the improvement of their training programs, the quality of their trainers and administrative staff, and their responsiveness to labor market needs and demands. Therefore, the current feasibility of private investments, as well the depressing environment of business, will impact negatively on the supportive VET environment and thus reduce the desired outcomes.

One of the possible consequences of this is that the highly qualified staff members might encounter problems in fulfilling their roles, without capable and trained support staff. In addition, without sufficient administrative and financial assistance, trainers may find themselves having to perform many middle-level functions at the expense of their primary work. Furthermore, the issue of nationalization could result in mass confusion and organizational imbalances in the recruitment process.

<sup>54</sup> See QSA, *Trainees by nationality & gender & type of training agency 2012*, Table 9, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

Therefore, operational misuse may occur as experienced individuals accept posts lower down the occupational ladder. Therefore, responsibility and reorganization are two major factors affecting VET outcomes. Responsible internal and external supervision is needed to ensure the liability and accountability of VET operations, programs and assessments. Responsible internal supervision could serve as a medium of self-assessment and accountability with regard to training goals and missions. External supervision serves the idea of having a “watch officer” who ensures the quality and suitability of VET programs and who monitors the outcomes. Therefore, the continuation of responsibility and reorganization in a training institution may guarantee the continuation of training achievements and more successful outcomes.

Poorly administered, with no logical reading of market indicators, private institutions, on the other hand, tend to obtain international accreditation and qualifications from several multinational organizations, without a clear vision of the alignment of those accreditations with the national strategies.

One of the major disadvantages of this tendency is the inadequate supervision of qualifications suppliers. Some of the multinational organizations provide qualifications only for profitable purposes, and they rarely conduct inspection tours. On the other hand, many of the training centers do not adhere to the procedures and regulations of those providers, due to a lack of local and international supervision, as well as the poor inspections conducted by those global providers. Therefore, many learners may run the risk of being deceived by marketing intermediaries from these centers, because they do not have a solid background knowledge of the accreditations in question. Furthermore, the training providers do not regularly publish sufficient educational publications on the accreditations, which are promoted via media or marketing kits.

As stated earlier, this decline in qualification and accreditation standards could be attributed to general assumptions on the role of these qualifications in determining employment opportunities. Yet, new trends indicate that the links between these qualifications and the recruitment process are weak<sup>55</sup>.

Hence, many training centers in Qatar do misuse or misinterpret accreditation systems because of the lack of the learners’ awareness, including the governmental institutions. However, the private institutions try to provide their best high quality training in case when a training department of one of the organizations approaches them. This is because these corporate training departments have experienced personnel specialized in training who would know the situation well. Unfortunately, typical learners who seek personal development do not have the same background.

At present, there are no clear national standards that specify the desirable outcomes of VET programs. Most state laws dealing with standards, licenses and certification are fairly innocuous in this regard – especially with regard to the private sector. The only existing standards for training are minimal and

---

<sup>55</sup> CEDEFOP, *Modernizing vocational education and training: fourth report on vocational training in Europe*, Vol. 1, p 108, Luxembourg, 2009.

established by external accreditation providers or by the local training departments of organizations. Without clear national standards for each program, a training institution can set its own standards, based on a variety of variables regarding training material, methodologies, trainers, classrooms, etc.

The usual arguments for the implementation of standards are that people don't know what they should be doing, or they don't know about new changes in the training field with regard to certification and accreditation. Conferences, newsletters and competitors could be sources of information on changes in accreditation or certification. Nevertheless, standards are rarely rewritten or updated fast enough to keep up with any changes. Standards that do not change fast enough following changes, result in outdated standards that knowledgeable vendors no longer use. Standards, which move too fast once they become part of the flow of existing ideas, have not been tested as yet.

### **Qatar's Macro-environmental Challenges**

Most of the literature indicates agreement on the major impact of political, economic, cultural, demographic and technological forces on VET, as well as the influence of the labor market. Therefore, it is crucial to understand how and why the state should intervene, taking into consideration the other interrelated micro-forces and the number of internal stakeholders as visualized earlier in figures.

Looking at the role of the state, in comparison to VET models in Germany and the USA, unlike Qatar, one notices the considerable amount of government attention and supervision by both countries with regard to VET governance,<sup>56</sup> which could be illustrated by the table below.

**Table 4**

|                  | <b>Germany</b>                                                                  | <b>USA</b>                                                                                                        |
|------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| VET Governance   | Centralized: Corporatist arrangement at national level.                         | Decentralized: Governance is dispersed among the 50 states & thousands of local districts.                        |
| VET Stakeholders | Federal government, business groups, and labor organizations (social partners). | State directors, States VET departments (advisory boards comprising representatives from businesses, labor, post- |

---

<sup>56</sup> Prof. Antje Barabasch & Prof. Felix Rauner, *Work and Education in America: The Art of Integration*, Vol. 1, 2012, p 82, Springer Publications.

|                                |                                                                                                                           |                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
|                                |                                                                                                                           | secondary institutions.                                                                                 |
| VET Legislation/<br>Legislator | Federal government.                                                                                                       | State legislature enacts laws that govern vocational education and state boards formulate VET policies. |
| VET Curricula                  | Coordinated with the agenda defined at national level by social partners.                                                 | Different agendas & approaches.                                                                         |
| VET Certification              | One set defined by social partners.                                                                                       | Different sets.                                                                                         |
| VET Standards                  | National: Social partners are responsible for defining the needs pertaining to occupations, knowledge, skills, abilities. | Standards vary in accordance with the federal states.                                                   |

CEDEFOP then investigated the steering and reforming roles in Denmark, France, Germany and the UK. As neo-classical economists argue from a market perspective, competition was recognized to be determining the roles of training institutions, based on supply-demand variables. Therefore, a desirable state role was necessary to guarantee the functioning of the VET System by regulating the assessment, definition and recognition of qualifications<sup>57</sup> and by controlling the effectiveness, costs and quality of training institutions<sup>57</sup>.

However, there is another trend that regards the role of the state as complementary intervention, as the necessity of institutional arrangement aims to prevent distortions and disequilibria<sup>58</sup>. This role illustrates that the institutionalized steering arrangements rely on public responsibility. Where there are market failures and incompetent training, there should be a public awareness of minimum standards; involvement by social partners, characterized by their consultative and participative roles in decision-making and VET arrangements; alternating of VET formats by increasing the cooperation and

---

<sup>57</sup> CEDEFOP, *Training for a Changing Society: A report on current vocational education and training research in Europe 1998*, p.1, Tessaring, M. (ed.), Luxembourg, 1999, 2nd edition, retrieved on 03/09/2012 from <http://www.cedefop.europa.eu/EN/about-cedefop/projects/research-laboratory/first-research-report-synthesis-report.aspx>

<sup>58</sup> CEDEFOP, Op. cit., p 1.

understanding between companies in terms of training needs, assessments and operations; a definition of national standards or qualifications, in order to clarify career and development opportunities and improve coherence of training programs; as well as easier access to continuing vocational routes, so as to align VET programs with regular educational policy<sup>59</sup>.

This implies that any role, which logically entails responsibility, must show concomitant authority. The supervisory role is usually endowed with an allocated authority to truly oversee the work, providing back-up support and accepting responsibility. To carry out this function, the state should get to know the nature of the supervised work, such as its strengths and weaknesses, knowledge gaps, interpersonal relationship skills, personality style, areas of flexibility and rigidity, the level of maturity, a range of skills, etc.

Therefore, a lack of internal institutional supervision may result when the training administration is incompetent. Certain issues may need to be addressed and resolved with regard to poor internal supervision, such as sessions lacking punctuality; the management of trainees' records; making and returning calls; customer service and follow-ups; and working in collaboration with other staff members and collateral professionals. Hence, a lack of professionalism and efficiency with regard to internal supervision could be easily addressed if the external (governmental) supervision of training becomes more efficient and effective in the form of a supervisory role played by the state.

In Qatar, no direct government supervision is practised by state departments or committees and even by individuals. As stated earlier in Chapter 1, one of the major political challenges lies in managing and controlling the operational behavior of VET institutions. Unfortunately, despite the fact that the SEC is the authority that grants training institutions a license to provide training activities, there is still no regular training supervision or efficient inspections by any of its departments and committees, which is due to the fact that there is no SEC supervisory body that is entrusted with such tasks and responsibility.

Back to the American model of VET:

*Economists have pointed out the shortcomings of the American system of vocational education. Michael Porter, for example, in his writings about the "Competitive Advantage of Nations" outlined the structural weaknesses of the American educational system: While education should remain a state and local responsibility, a federal role in education is not only legitimate but vital at a time when state and local efforts are incomplete.*

---

<sup>59</sup> CEDEFOP, Op cit., p 30, retrieved on 03/09/2012 from <http://www.cedefop.europa.eu/EN/about-cedefop/projects/research-laboratory/first-research-report-synthesis-report.aspx>

Porter advocated national standards and resources, as well as a stronger participation by enterprises in the qualification of skilled workers.<sup>60</sup>

In addition, the poor control that federal government exercises over VET in the American model, resulted in different standards and assessments and a lesser alignment with the labor market than is the case in Germany<sup>61</sup>. This poor governance resembles the SEC governance via its three subordinate institutes, of which not one executes the required role of the state of either reforming and/or steering the VET System<sup>62</sup>. In other words, the regulative role of public policy seems missing in VET's educational policy in Qatar. In contrast, Germany has a strong regulative model of governance with regard to VET and relatively strong central powers over VET.

In this vein, there is a lack of an effective regulative role in Qatar, which may result in the inadequacy of internal and external supervision of training institutions. Besides, as stated earlier by the CDPSC General Manager<sup>63</sup>, the absence of a clear communication structure and an assessment of the functionality of VET institutions constitutes the most common deficiency in many training organizations and institutes. Yet, if any serious administration decides to end the poor performance of its departments, it would not take that much work and reorganization.

In addition, there exist no local evaluation of, or clear statistics about the functionality and efficiency of training institutions. Neither the SEC nor any official department has clear data or published studies on the alignment of the current training outcomes with national strategies. It is clear that the lack of effective communication and follow-ups by all VET stakeholders constitutes a crucial challenge. This is due to the fact that, unlike Germany, there is no unified single set of standards, assessments or certificates for any given domain<sup>64</sup>.

Furthermore, there is no clear simulative role by the SEC to motivate VET institutions, as there have been no evaluation results publicized to increase learner awareness and push these institutions towards dedication and hard work. Only simple directories and public chatting websites are involved in discussions, which might assist in encouraging learners or increasing their awareness about the best training service providers in Qatar – especially those learners who do not have the privilege of attending government training programs. Those directories, unfortunately, would only represent personal opinions without any evidence.

---

<sup>60</sup> Dr Antje Barabasch & Prof Dr Felix Rauner, *Work and Education in America: The Art of Integration*, Vol. 1, 2012, p 252, UNESCO-UNEVCO 2012, Springer Publications, London & New York, e-ISBN 978-94-007-2272-9,

ISBN 978-94-007-2271-2.

<sup>61</sup> Op. cit. p 78.

<sup>62</sup> See the responsibilities of these institutes at the end of Chapter 1, retrieved from the SEC website.

<sup>63</sup> Al-Raya Qatari Newspaper, published on 11/6/2012, <http://www.raya.com/home/print/f6451603-4dff-4ca1-9c10-122741d17432/4f40fc49-32fb-4d88-beae-b6b7eec08655>

<sup>64</sup> Prof. Antje Barabasch & Prof. Felix Rauner, *Work and Education in America: The Art of Integration*, Vol. 1, 2012, p 78, Springer Publications.

Technologically, even with the announcement of launching a new SEC website for training services, the purpose of the website is only to educate learners about which centers are licensed by the SEC<sup>65</sup> & <sup>66</sup>. In other words, it does not serve the needs of learners to be educated about the quality of all training services and programs, or warnings regarding ineffective and unproductive institutions that do not meet with learners' needs and goals. This is more likely to be the case if the designed training programs do not ensure the success of the major elements of training, such as an efficient needs assessment, clear instructional objectives, good design, efficient implementation and sufficient official evaluation.

Economically, the financial challenge that the Qatar VET Sector faces is not a domestic challenge but rather a global one. During times of economic challenge, contributions by government are regarded as a crucial element in supporting affected businesses and markets. Regarding the limited financial resources of private VET institutions, there should be intensive financial support to counter any turbulent financial performance. According to the QS), Qatar experienced major rising waves of inflation in the years 2003 to 2007<sup>67</sup>. During this period, inflation in rent and wages was enormous, as Qatar experienced one of the highest inflation rates in the world. This increasing inflation rate during this period affected VET in many ways.

**Figure 7**

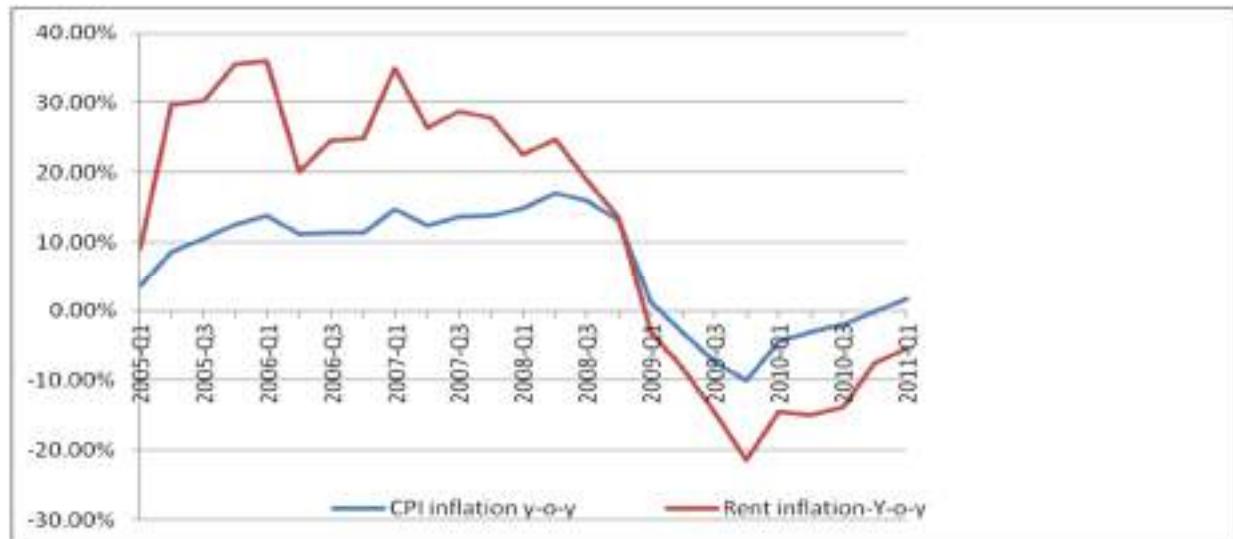


Figure 3.6<sup>68</sup>. (A line graph of inflation rates during the past five years, indicated on a quarterly basis.)

From one perspective, the greatest economic challenge is posed by the variable and fixed costs of VET institutions and operations – especially private institutions. Many training providers were founded and financed by private owners or shareholders – more in particular private institutions that constitute

<sup>65</sup> See Announcement <http://www.sec.gov.qa/En/Media/News/Pages/NewsDetails.aspx?NewsID=3397>

<sup>66</sup> Up to the date of this paper, the website was still inaccessible.

<sup>67</sup> QSA, Consumer Price Index Reports 2004-2010, <http://www.qix.gov.qa>, © QALM Team.

<sup>68</sup> QSA CPI Report, <http://www.qix.gov.qa>, © QALM Team.

more than 65 centers situated in Qatar<sup>69</sup>. Though, in terms of cost and expenditure, the rent on training venues and staff wages were increasing rapidly in such a way that most training providers had to increase their fees. This resulted in fewer numbers of trainees and thus smaller revenue – especially with regard to the severe competition between private institutions themselves, as well as between private and public institutions. On the other hand, the high inflation rates reduced the number of trainees due to insufficient income and price increases.

Given their relatively low productivity, VET private institutions could actually operate if production costs – including payroll costs – became low enough to allow for fees that consumers would be willing to pay. This, however, is a risk that could create greater inequality, as generating service sector jobs in the public sector, by expanding public sector consumption,) is constrained by budgetary limits. (However, it could also guarantee greater equality via higher wages for low-skilled service-sector employees.)

Inflation in Qatar did indeed decrease between 2009 and 2010. Yet, a new wave of inflation has been increasing gradually since 2011. This increase has caused the same economic and financial problems for businesses in general and for the VET Sector in particular.

**Figure 8**

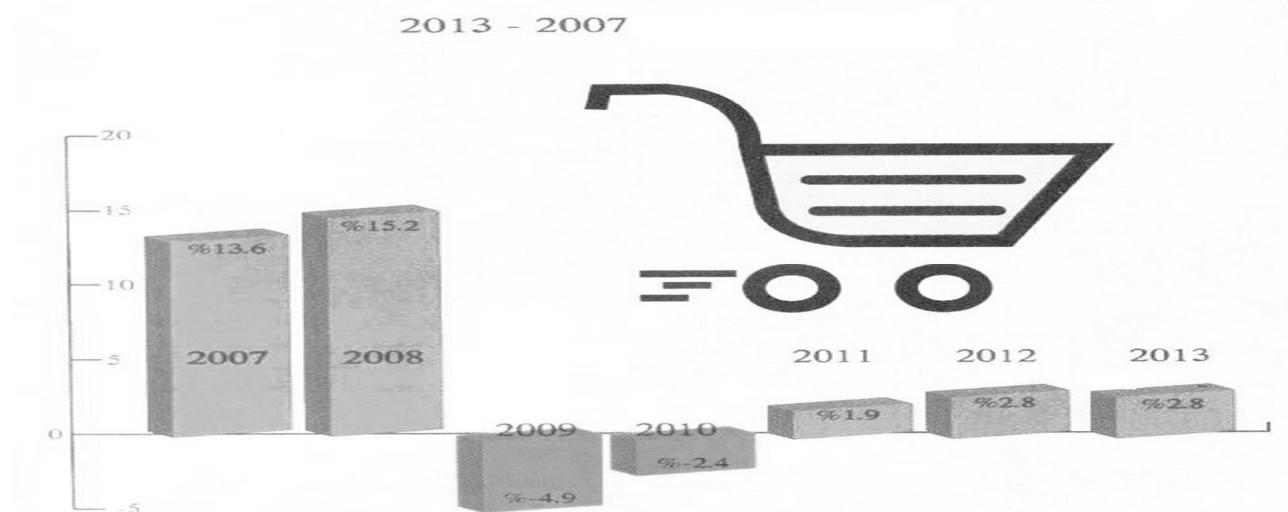


Figure 3.7<sup>70</sup> (Inflation rate: 2007-2013)

Due to these turbulent waves of inflation, both public and private VET providers therefore tended to reduce costs by recruiting less experienced

<sup>69</sup> See QSA, *Trainees by nationality & gender & type of training agency 2012*, Table 1, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

<sup>70</sup> Al-Sharq Al-Iqtisadi Newspaper, Issue No. 9299, p 1, dated 01/12/2013.

administrators and trainers. On average, highly experienced trainers demand higher salaries and wages, which would have been unaffordable for the institutions during the inflation period. In fact, the rising waves of rent on commercial buildings resulted in the erosion of 60% of employees' income in Qatar<sup>71</sup>. Hence, experienced trainers may become scarce as many of these expatriates have either left the country or found other careers unrelated to training, due to the high of cost living and the low rates of paid wages.

Therefore, where the fixed training costs and overheads were high<sup>72</sup>, the recruitment of administrators for training institutions was mainly based on lower wages, which could result in recruiting inexperienced staff members. This economic challenge overlaps with the micro-environmental administrative challenge. The poor financial management of VET institutions might have caused administrative problems where those administrators, including both junior and senior managers, neglected to implement certain quality standards in order to gain revenue.

The reason for this dilemma lies in the fact that most of the training institutions in Qatar are in the private sector and most of those institutions' founders are business people who might lack the knowledge and skills required to run an educational organization. However, apparently a number of policies and procedures pertaining to sales do not intersect with educational necessities and requirements and they do not serve the VET objectives and yield the desired quality.

Globally, experts conducted a survey in 2007 to explore the financial challenges facing training administration. The survey covered major companies such as Cisco, ADP, EMC and Hyperion, which had notably achieved efficiency in corporate learning<sup>73</sup>. The survey indicates that the biggest surprise in the findings was related to training administration expenses. Results showed that administrative expenses were very high in most organizations. Forty percent of respondents said their companies spent 20% to 50% of their training budgets on administration and 7.3% said their companies spent **more** than 50% on administration. According to the findings, these expenses are not likely to decrease. Approximately 60% of respondents expect administrative spending to increase over the next few years. Only 5.4% predicted a decrease<sup>74</sup>.

Therefore, training administration costs more than the actual expenditure on education needs. Employee development has a positive bottom-line impact, while administrative work brings no incremental value to the table. Most

---

<sup>71</sup> Op. cit. p 1.

<sup>72</sup> Op cit. p 4.

<sup>73</sup> Expertus & TrainingOutsourcing.Com, *Training Challenges Report 2006-2007*, p 3, July 2007, retrieved on 01/05/2012 from [www.trainingindustry.com/.../Toolkit/.../Expertus-TO\\_Survey\\_Results.pdf](http://www.trainingindustry.com/.../Toolkit/.../Expertus-TO_Survey_Results.pdf)

<sup>74</sup> Expertus, Op. cit. p 4.

companies view administrative expenses as necessary and fixed – as is the case in Qatar. In fact, the survey found that 65% of respondents thought their spending was “about right” and less than 15% thought it was too high<sup>75</sup>. However, careful processing and staff analyses usually uncover significant inefficiencies in areas such as scheduling, registrations, facility management, material fulfillment, evaluation and reporting.

Another co-related eco-political challenge lies in the funding of VET institutions and operations. In fact, most countries are confronted with the issue of sustainable funding for a sector whose costs are higher than those of traditional education. Many countries prioritized the development of primary education at the expense of other elements in their education systems, which accordingly resulted in an imbalance with regard to strengthening human capital, employment and economic growth<sup>76</sup>. This is despite the fact that VET had become an attractive sector of education for people where they have the opportunity to enhance their knowledge and capabilities. For instance, 47% of Europeans, who participated in an EU survey, have been involved in VET programs or are currently involved, and 83% believe that VET contributes positively to the economy<sup>77</sup>.

From a socio-demographic context, there is a trend to explore the way in which VET encounters challenges related to gender inequality, sexual preference and nationality discrimination, which are becoming more complex and vary across regions<sup>78</sup>. In fact, many societies look at the biological difference between men and women and hypothesize that there are differences in their values, brain structures, competencies and levels of commitment. Another societal approach looks at women's major responsibilities with regard to child and home care, in addition to their jobs, as obstacles that reduce their innovation and creativity at work. However, as women proved their unique competencies and qualities, gender awareness increased dramatically to influence these social assumptions as a reflection from the workplace to a larger societal body.

In this regard, socio-political endeavors should be elaborated upon, so as to enhance a national vision and development plans. Empowerment of women can

---

<sup>75</sup> (Expertus, Op. cit. p 5.

<sup>76</sup> Lux-Development in collaboration with GTZ & AFD, *The key issue challenges in assistance for vocational training*, workshop proceedings, p 6, 30 June-1 July 2009, Luxembourg, retrieved on 15/11/2012 from [www.lux-development.lu/workshop/vet/docs/Actes\\_UK\\_light.pdf](http://www.lux-development.lu/workshop/vet/docs/Actes_UK_light.pdf)

<sup>77</sup> EUROBAROMETER, *Attitudes towards vocational education and training*, p 7, 2011, European Commission publication, retrieved on 1/5/2012 from [http://ec.europa.eu/public\\_opinion/index\\_en.htm](http://ec.europa.eu/public_opinion/index_en.htm)

<sup>78</sup> Dr Antje Barabasch & Prof. Dr Felix Rauner, *Work and Education in America: The Art of Integration*, pp 10, 123, 158, 200, UNESCO-UNEVCO 2012, Springer Publications, London & New York, e-ISBN 978-94-007-2272-9; ISBN 978-94-007-2271-2.

intensify and improve their participation in planning and decision-making processes. This kind of elaboration would entail higher degrees of analysis, coordination and integration of efforts, whether in organizations or in society. In fact, the integration of efforts could improve the status of women nationally and change the pattern of societal structures and social inclusion. Social inclusion, therefore, assists with economic development and results in increasing employment opportunities, while indirectly facilitating social and family integration.

Economic development, therefore, could be embedded in the roles that women are currently performing. One of the major roles played by women to improve the economic performance of a nation could be described as a productive role, generating income and assisting with market production. Another could be regarded as a reproductive role, referring to childcare, the rearing of children and their educating responsibilities in the reproduction of a workforce. A third could be described as a community management role, embedded in social and community activities, so as to ensure the provision of resources and extend their reproductive role<sup>79</sup>.

Therefore, a woman's status within the family determines her economic, social and political participation in the public sphere<sup>80</sup>, while it could also be seen as a reversal process in which the dynamics could consequently affect her status, both within the family and in society. It has been noted that a sizable number of women in Qatar tend to join VET programs at private centers – actually almost double the number of men<sup>81</sup>. The reason behind this can be attributed to a tendency to stay at home as a housewife, rather than getting involved in the labor market for the sake of the economic development.

*Economic development may influence gender inequality in the labor market through the effects of the wages. As mentioned above, wages tend to increase with economic development and that this increases the opportunity cost of leisure or not working. As the opportunity cost increases, more people who were formerly not working will be induced to participate in the labor force. In a society with gender inequality in the labor market, the majority of the persons not working would be women, and hence it is likely that the majority of the new entrants into the labor market would be women. Consequently, as the economy [develops], it is*

---

<sup>79</sup> Commonwealth Secretariat, *Gender Management System Handbook*, p 20, Commonwealth publication, June 1999, retrieved on 22/12/2012 from [www.thecommonwealth.org/.../%7BB8EC3135-2CA1-46A5-A10C-F215B80FE636%7D\\_gms\\_ref.pdf](http://www.thecommonwealth.org/.../%7BB8EC3135-2CA1-46A5-A10C-F215B80FE636%7D_gms_ref.pdf)

<sup>80</sup> Commonwealth Secretariat, Op cit. p 28.

<sup>81</sup> See QSA, *Trainees by nationality & gender & type of training agency 2012*, Table 9, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

*expected [that] the gender equality in terms of labor force participation rates would increase.<sup>82</sup>*

In Africa, for instance, women own less than 1% of the African continent's landmass, they receive only 1% of total credit to agriculture and they have fewer economic rights and less access to economic opportunities, such as credit facilities<sup>83</sup>. If women's status were to improve in Africa and the type of economic, social and political participation could be changed, the economic turnover would increase rapidly. Hence, the figures below indicate how gender equality could contribute to either economic growth or failure.

**Figure 9**

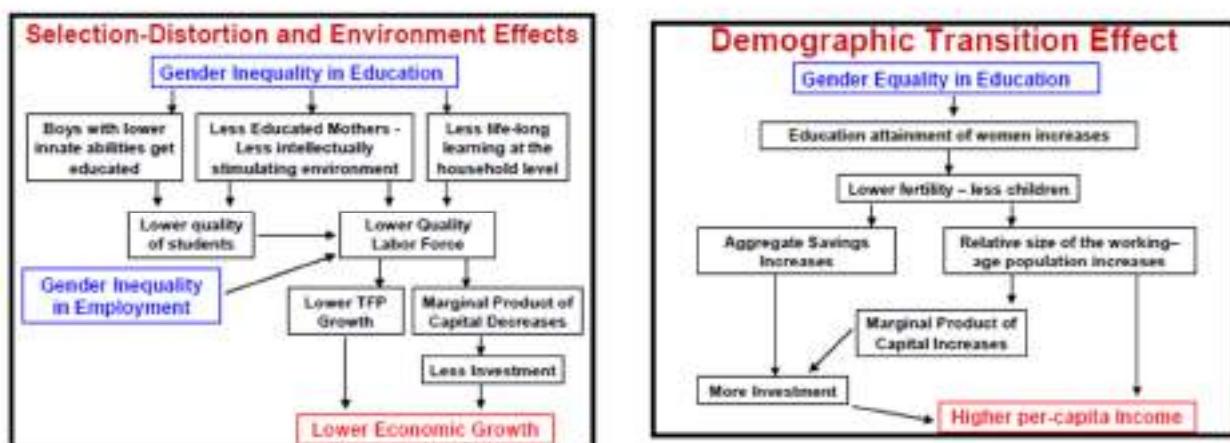


Figure 3.8<sup>84</sup>

As can be inferred from the above figures, the conceptualization of the roles of women in the Qatari society is based on cultural perception, based on biological difference and physical abilities between genders. The dominant perception that women are incapable of working in certain jobs due to biological differences could have a major effect on the recruitment process, represented by gender preferences.

This is due to the many assumptions made in several companies and institutes, e.g. men are capable of doing things that women cannot do; or women's roles in

<sup>82</sup> Derek H.C. Chen, *Gender Equality and Economic Development: the Role for ICTs*, p 13, April 2004, a World Bank publication, retrieved on 22/12/2012 from [http://info.worldbank.org/etools/docs/library/117321/35079\\_wps3285.pdf](http://info.worldbank.org/etools/docs/library/117321/35079_wps3285.pdf)

<sup>83</sup> APF & NEPAD Secretariat, *Gender and Economic Empowerment in Africa*, Africa Partnership Forum Support Unit, Berlin, May 2007, retrieved on 19/12/2012 from the OECD Organization website [www.oecd.org/site/africapartnershipforum/39921766.pdf](http://www.oecd.org/site/africapartnershipforum/39921766.pdf)

<sup>84</sup> Derek H.C. Chen, *Gender Equality and Economic Development: the Role for ICTs*, a World Bank publication, April 2004, retrieved on 22/12/2012 from [http://info.worldbank.org/etools/docs/library/117321/35079\\_wps3285.pdf](http://info.worldbank.org/etools/docs/library/117321/35079_wps3285.pdf)

organizations are decorative. Therefore, this dominant perception of gender preferences put an extra burden on the VET Sector to address new sensitive cultural perceptions in the labor market, such as the predominant gender stereotypes. The following table indicates clear gender imbalances between males and females in the technical VET domains in Qatar.

**Table 5**

| Type of Training<br>Domain      | Total Trainees | Females | Males  |
|---------------------------------|----------------|---------|--------|
| <b>Administrative</b>           | 29,495         | 14,417  | 15,078 |
| <b>English Language</b>         | 7,673          | 3,592   | 4,081  |
| <b>Information</b>              | 11,075         | 6,316   | 4,759  |
| <b>Technology</b>               |                |         |        |
| <b>Communication</b>            | 408            | 112     | 296    |
| <b>Technology</b>               |                |         |        |
| <b>Law</b>                      | 323            | 98      | 225    |
| <b>Training of<br/>Teachers</b> | 3,071          | 2,292   | 779    |
| <b>Functional</b>               | 280            | 159     | 121    |
| <b>Rehabilitation</b>           |                |         |        |
| <b>Oil &amp; Gas</b>            | 6,333          | 377     | 5,956  |
| <b>Mining</b>                   | 4,779          | 48      | 4,731  |
| <b>Petrochemical</b>            | 466            | 8       | 458    |

<sup>85</sup> See QSA, *Trainees by nationality & gender & type of training agency 2012*, table 2, issued on 28 August 2013, retrieved on 10/01/2014 from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>

| <b>Industries</b>                       |               |        |        |
|-----------------------------------------|---------------|--------|--------|
| <b>Banking</b>                          | 1,197         | 575    | 622    |
| <b>Operations</b>                       |               |        |        |
| <b>Scientific Sessions (young)</b>      | 693           | 554    | 139    |
| <b>Occupational Safety and Security</b> | 4,173         | 328    | 3,845  |
| <b>Manual Occupations</b>               | 341           | 341    | 0      |
| <b>Total</b>                            | <b>70,307</b> | 29,217 | 41,090 |

The pronounced gender imbalance in the education system relies on considerable social and cultural limitations pertaining to the academic subjects and types of employment considered as appropriate for women. The range of specializations available to female students at secondary and university level is still more restricted than those available to males, due to the cultural conceptualization of women's role in the labor market. There are, for example, no vocational schools for girls and, at the local gender-segregated university; women are discouraged from pursuing studies in such areas as engineering. Although an increasing number of jobs have been made available to female graduates in recent years, notably in the education and health sectors, the labor market potential of women has gone largely untapped and men dominate many of the occupations that are "feminized" in the West.

Furthermore, new technologies are required to assist with the transition into a more knowledge-based economy, which requires specific unavailable skills and expertise in the Qatar VET Sector. Hence, technological advancement creates a greater demand for highly skilled workers and therefore there will be increased pressure on human development strategies<sup>86</sup>.

Social and cultural inclusion could be realized by realistically addressing problems via VET and trying to solve such problems in an integrated fashion.

---

<sup>86</sup> Manuel Souto Otero and Andrew McCohsan, *Study on Access to Education and Training: Final Report for the European Commission*, p 10, ECOTEC, Research and Consulting Ltd, December 2005, Birmingham, UK.

The process of advancing skills therefore enhances participation in the community<sup>87</sup>. Hence, the challenge of manpower supply affects the levels of education and productivity as is the case in the human capital theory.

## Final Conclusion

Due to the current macro and micro-environmental challenges, the Qatari model seems to lack the ideal conditions and environment that would enhance the alignment of VET outputs with the national vision and strategies. In comparison to the German and the American VET models, there is indeed a role for the state to play – and this is not happening. The fact that the SEC is the only legitimate authority in Qatar to govern the VET Sector, unfortunately narrows down the opportunity to gain a better understanding of the VET macro and micro-environments in Qatar, as well as the opportunity to address the challenges accordingly, especially in the clear absence of other important stakeholders, such as the labor organizations (social partners) and business groups.

In addition, contrary to the situation in Germany, the wide variety of institutional agendas in Qatar would result in a lesser contribution to the national vision, as many of these institutions work in isolation with different perspectives and agendas in mind – especially in the context of the absence of clear legislation and national standards. The vocational programs, on the other hand, seem disconnected from the development strategies, as there are no clear studies and empirical research into the labor market needs and demands pertaining to skills and expertise. There is a limited span of offerings from the private VET institutions, which is due to a potential failure in understanding the investment opportunities in the Qatar VET Sector, as well as the feasibility of such investments.

In addition, when reading other environmental indicators on the Qatar VET sector, a few gaps could be identified between the design and the implementation of the domestic VET strategy (2011-2016), especially with the notable absence of the SEC's role in creating a supervisory body and quality-assurance system; in developing Technical Vocational Education and Training (TVET) programs for private VET institutions, based on labor market needs; in increasing the social awareness role in shaping the needs pertaining to VET; and in enhancing VET Public-Private Partnerships (PPPs).

The table below indicates a comparative simulation of the Qatar VET System.

---

<sup>87</sup> CEDEFOP, *Training for a changing society*, 2<sup>nd</sup> version, p 188, Luxembourg, 1999.

**Table 6**

|                                | <b>Germany</b>                                                                                                            | <b>USA</b>                                                                                                                              | <b>Qatar</b>                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| VET Governance                 | Centralized: Corporatist arrangement at national level.                                                                   | Decentralized: Governance is dispersed among the 50 states & thousands of local districts.                                              | Centralized: SEC only.                                                                       |
| VET Stakeholders               | Federal government, business groups and labor organizations (social partners).                                            | State directors, State VET departments (advisory boards comprising representatives from business, labor & post-secondary institutions). | SEC Higher Education Institute (HEI) & VET institutions' directors.                          |
| VET Legislation/<br>Legislator | Federal government.                                                                                                       | State legislature enacts laws that govern vocational education, and state boards formulate VET policies.                                | No effective VET legislation; only SEC licenses.                                             |
| VET Curricula                  | Coordinated with the agenda defined at national level by social partners.                                                 | Different agendas & approaches.                                                                                                         | Different agendas & approaches.                                                              |
| VET Certification              | One set defined by social partners.                                                                                       | Different sets.                                                                                                                         | Different sets of certifications.                                                            |
| VET Standards                  | National: Social partners are responsible for defining the needs pertaining to occupations, knowledge, skills, abilities. | Standards vary in accordance with federal states.                                                                                       | No Standards. Only SEC licensing requirements, pertaining mainly to facility specifications. |

Therefore, it may be concluded that the Qatar VET system is similar to a shattered window that has fallen to pieces. The only way to assemble it as one unit again, is for the state to play a more sensible role; an increase in viable legislation; standards; programs; and reformation.

Hence, there is a current need for numerous reform strategies to be examined and institutionalized. State reforms, therefore, is the missing link in the VET System. Typical reforms should focus on specific areas and aspects that would improve the efficiency of the Qatar VET System.

Yet, the most crucial step to rectify the current VET Sector in Qatar is to establish an official supervisory body, which would be in charge of assessment and supervision for all training activities and programs of both local public and private institutions. In addition, there should be a form of aid program, which

supports regressive VET institutions that are suffering financial or administrative problems. These possible simulative and regulative roles of the state could therefore enhance the alignment of the VET Sector outcomes with current national development strategies.

In this way, the proposed official body could implement many assessments and reviews that would be effective in controlling and standardizing the quality of training. Yet, it is not an easy mission, as the training programs and methodologies of training institutions vary distinctively according to their different socio-economic interests and background. However, unifying the standards, regulations and procedures of those vendors under an SEC umbrella, could ensure a high quality of training and satisfactory outcomes, as well as the alignment of VET outputs with national development strategies.

Besides, as the SEC grants training licenses, it is highly recommended that a committee or a department should be established to conduct assessments and provide reports on the Qatar training system. Actually, the SEC has an evaluation institute that provides regular assessments for regular education schools, such as the Qatar Comprehensive Educational Assessment (QCEA); the Programs International Students' Assessment (PISA); and the Trends in International Mathematical and Science Study (TIMSS). Nevertheless, there is no evaluation institute that performs any assessments for VET institutions in Qatar<sup>88</sup>.

The SEC, therefore, has to do the following:

- Approach the six main VET areas, as indicated in the Conclusion, namely policy, program design, curriculum, professional development, evaluation and strategic planning in a practical manner.
- Create and clarify a set of national standards to be verified by state officials and policy-makers at a later stage.
- Design a national program model and criteria for vocational certification, in order to secure a better alignment with the national development strategies.
- Place greater focus on the professional development of trainers and educators in the VET Sector.
- As evaluation is the most important issue, the SEC should create an evaluation system that yields performance reports and empirical results, which would assist in revisiting the VET inputs in Qatar and developing a corresponding efficiency analysis.
- Finally, the SEC has to place greater focus on the development of plans for government budgets and funding for VET.

On the other hand, policy-makers and researchers should be increasingly encouraged to seek more empirical results, in order to test this research hypothesis and these assertions. In other words, this research has produced general conclusions, which need further empirical support. Other areas of research embedded in this book, call for broader investigation and tests. Perhaps

---

<sup>88</sup> SEC website, <http://www.sec.gov.qa/En/Pages/Home.aspx>

future research should address hypotheses and assertions centered on the efficiency of private VET institutions, the gender imbalances in the VET Sector, the impact of these challenges on the desired VET outcomes, as well as many other areas of research.

## Bibliography

- Al-Raya Qatari News Paper. (2012, 6 11). *A Plan to Prepare High School Students for Job.* Retrieved December 2012, from <http://www.raya.com/home/print/f6451603-4dff-4ca1-9c10-122741d17432/4f40fc49-32fb-4d88-beae-b6b7eec08655>
- Barabasch, A., & Rauner, F. (2012). *Work and Education in America: The Art of Integration.* London, New York: UNESCO-UNEVCO 2012 Speing Publication.
- Becker, Gary. (1962). Investments in human capital: a theoretical analysis. *Journal of Political Economy*, 9-44. Boston NBER.
- CEDEFOD. (1999). *Training for a Changing Society: A report on current vocational education and training research in Europe 1998.* Luxembourg: Publications Office of the European Union.
- CEDEFOD. (2009). *Accreditation and Quality Assurance in Vocational Education and Training.* Luxembourg: Publication Office of the European Union.
- CEDEFOD. (2009). *Modernizing Vocational Education and Training: Fourth Report on Vocational Training in Europe.* Luxembourg : EU Publications office .
- Chen, D. H. (2004). Gender Equality and Economic Development. *The World Bank* , 7-35.
- CIA. (n.d.). The World Fact Book. *GDP Per Capita* . USA. Retrieved 10 25, 2013 , from <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2004rank.html>
- Committee, Q. P. (n.d.). Qatar Population Status 2012. Doha, Qatar. Retrieved 10 31, 2013, from [http://www.gsdp.gov.qa/portal/page/portal/ppc/PPC\\_home/ppc\\_news/ppc\\_files\\_upload/populations\\_status\\_2012\\_en.pdf](http://www.gsdp.gov.qa/portal/page/portal/ppc/PPC_home/ppc_news/ppc_files_upload/populations_status_2012_en.pdf)
- Fran , F., Dumbrell, T., & Burke, G. (2008). *Vocational Education and Training: Providers in Competitive Training Markets.* NCVER. Adelaide: Australian Government.
- GSDP. (2008, July). Qatar National Vision 2030. Doha, Qatar. GSDP. Retrieved 11 03, 2013, from [www2.gsdp.gov.qa/www1\\_docs/QNV2030\\_English\\_v2.pdf](http://www2.gsdp.gov.qa/www1_docs/QNV2030_English_v2.pdf)
- GSDP. (2012). *Qatar's Third National Human Development Report.* Doha: GSDP, Gulf Publishing.

- Qatar General Secretariat for Development Planning. (2011, March). Qatar's National Development Strategy 2011-2016. (1), 128. Doha: QGSDP.
- Qatar Statistics Authority. (2012). *Consumer Price Index Report 2004-2010*. Retrieved 2012, from <http://www.qix.gov.qa>
- Qatar Statistics Authority. (2012). *CPI Report*. Retrieved 12 2012, from <http://www.qix.gov.qa>
- Qatar Statistics Authority. (2012). *Results of the 2010 Census of Population, Housing and Establishments*. Doha: qsa.gov.qa.
- qatcom.com. (n.d.). *qatcom Webpage*. Retrieved (24-12-2012) from <http://www.qatcom.com/listings/qatar-search/training-centres&page=1>
- QGSDP. (2011). *Qatar's National DEvelopment Strategy 2011-2016*. Doha: QGSDP.
- QGSDP. (2012). *Qatar's National Development Strategy 2011-2016*. Doha: QGSDP.
- QSA. (n.d.). 2010 Estimation. Doha, Qatar. Retrieved 10 31, 2013, from [http://www.qix.gov.qa/portal/page/portal/qix/subject\\_area?subject\\_area=177](http://www.qix.gov.qa/portal/page/portal/qix/subject_area?subject_area=177)
- QSA. (2012). Bulletin Labor Force . *Employment to Population Ratio 2007-2012*. Doha, Qatar. Retrieved from [www.qsa.gov.qa](http://www.qsa.gov.qa)
- QSA. (2012, 10). Economically Active Population by Nationality & Sector 2012. Doha, Qatar. Retrieved 11 15, 2013 , from [www.qsa.gov.qa](http://www.qsa.gov.qa)
- QSA. (2012, 10). Unemployment (+15) by nationality & education status. Doha, Qatar. Retrieved 11 15, 2013, from [www.qsa.gov.qa](http://www.qsa.gov.qa)
- QSA. (2013, August 28). Trainees by nationality & gender & type of training agency 2012. Doha. Retrieved 01 10, 2014, from <http://www.qsa.gov.qa/eng/GeneralStatistics.htm>
- Rauner , F., & Barabasch , A. (2012). *Work and Education in America: The Art of Integration*. NY: Springer.
- Schultz, T. (1960). Capital Formation in Education. *Journal of Political Economy* , 571-583. NY
- Schultz, T. (1960). Capital Formation in Education. *Journal of Political Economy*, 571. NY.
- SEC. (2011). *Education & Training Sector Strategy 2011-2016*. Doha: SEC.
- SEC. (2011-2012). Higher Education Institute Training enters. Doha, Qatar. Retrieved 01 14, 2014, from [www.sec.gov.qa/hei/HEI\\_centers2.xls](http://www.sec.gov.qa/hei/HEI_centers2.xls)
- SEC Website. (n.d.). Retrieved from <http://www.sec.gov.qa/En/Pages/Home.aspx>

Supreme Educational Council. (2011). Education and Training Sector Strategy 2011-2016. 10. Doha: Supreme Educational Council.

UNESCO. (1997, November). A Trans-disciplinary Vision for Cencreted Action. Geneva, UNESCO. Retrieved 11 11, 2013 , from [http://www.unesco.org/education/tlsf/mods/theme\\_a/popups/mod01t05s01.html#edu](http://www.unesco.org/education/tlsf/mods/theme_a/popups/mod01t05s01.html#edu)