

**Education, Diversification and Development
Challenges For Trinidad and Tobago:
Insights from a study that combines data
from the Global Entrepreneurship Monitor
database and the Global Competitiveness
Report of the World Economic Forum for
Trinidad and Tobago.**

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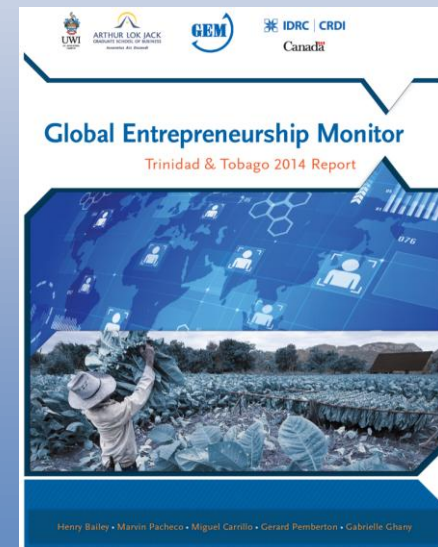
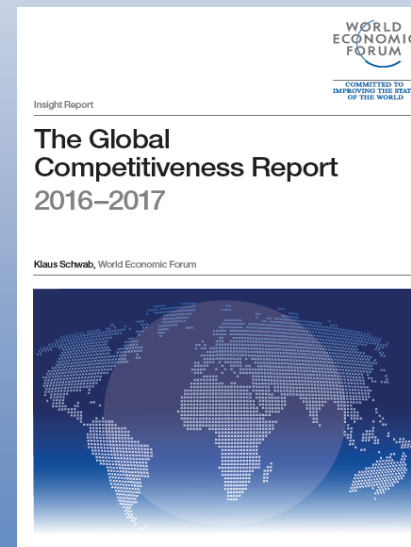
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Presentation Outline

- WEF Study: Overview and Key Findings
- GEM Study: Overview and key Findings
- Education, Diversification and Development
- Insights from the combined reports:
 - Innovation
 - National culture
 - The institutional framework
 - Recommendations



The Global Competitiveness Report



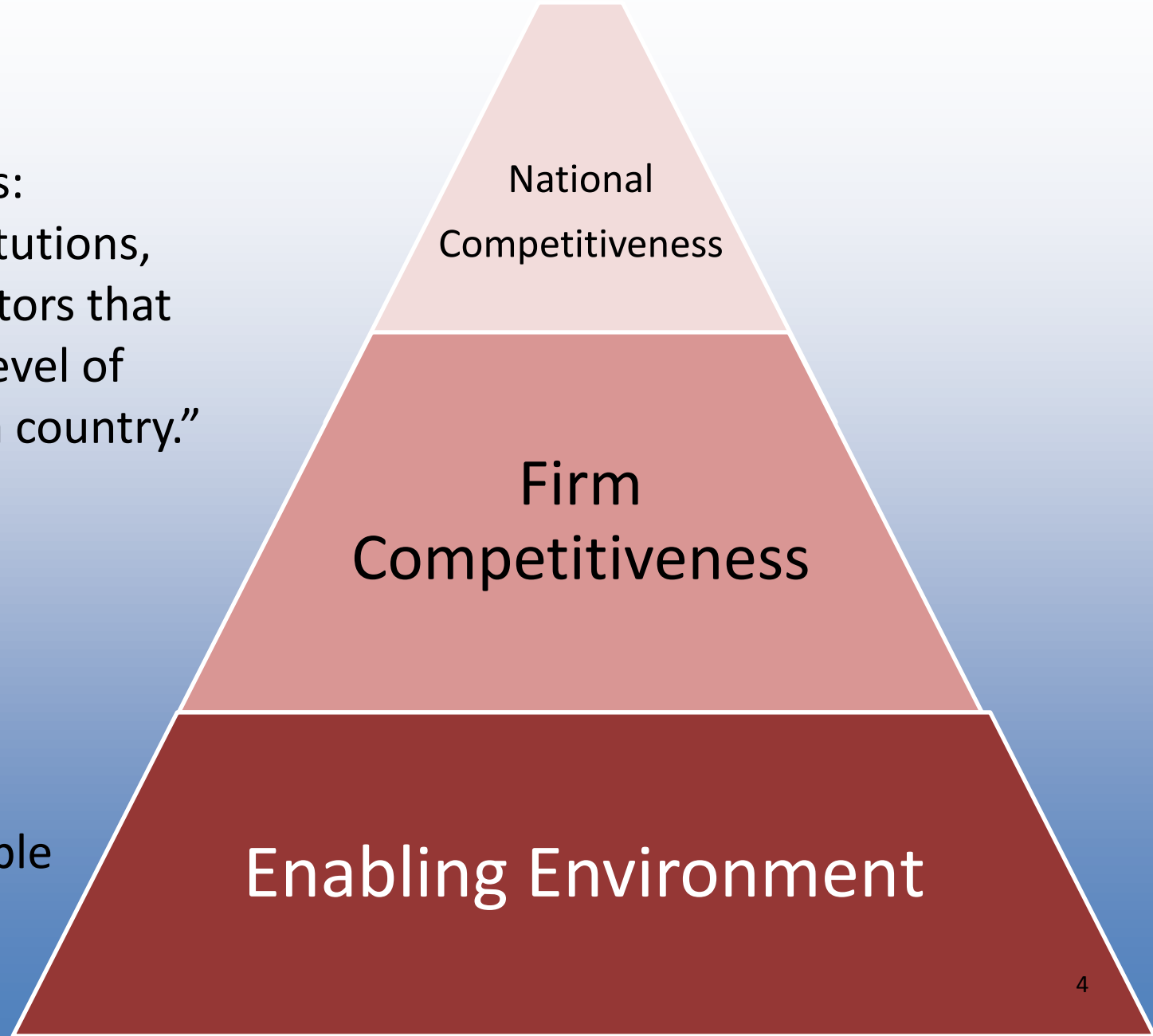
- Produced by the World Economic Forum
- Based on the Global Competitiveness Index (GCI)
- Captures information on the **micro** and **macro** economic foundations of national competitiveness.
- Data from public sources (MLAs etc) and survey of 151 people drawn from business & academia.

GCI - Implied Framework

Competitiveness:
“The set of institutions,
policies, and factors that
determine the level of
productivity of a country.”

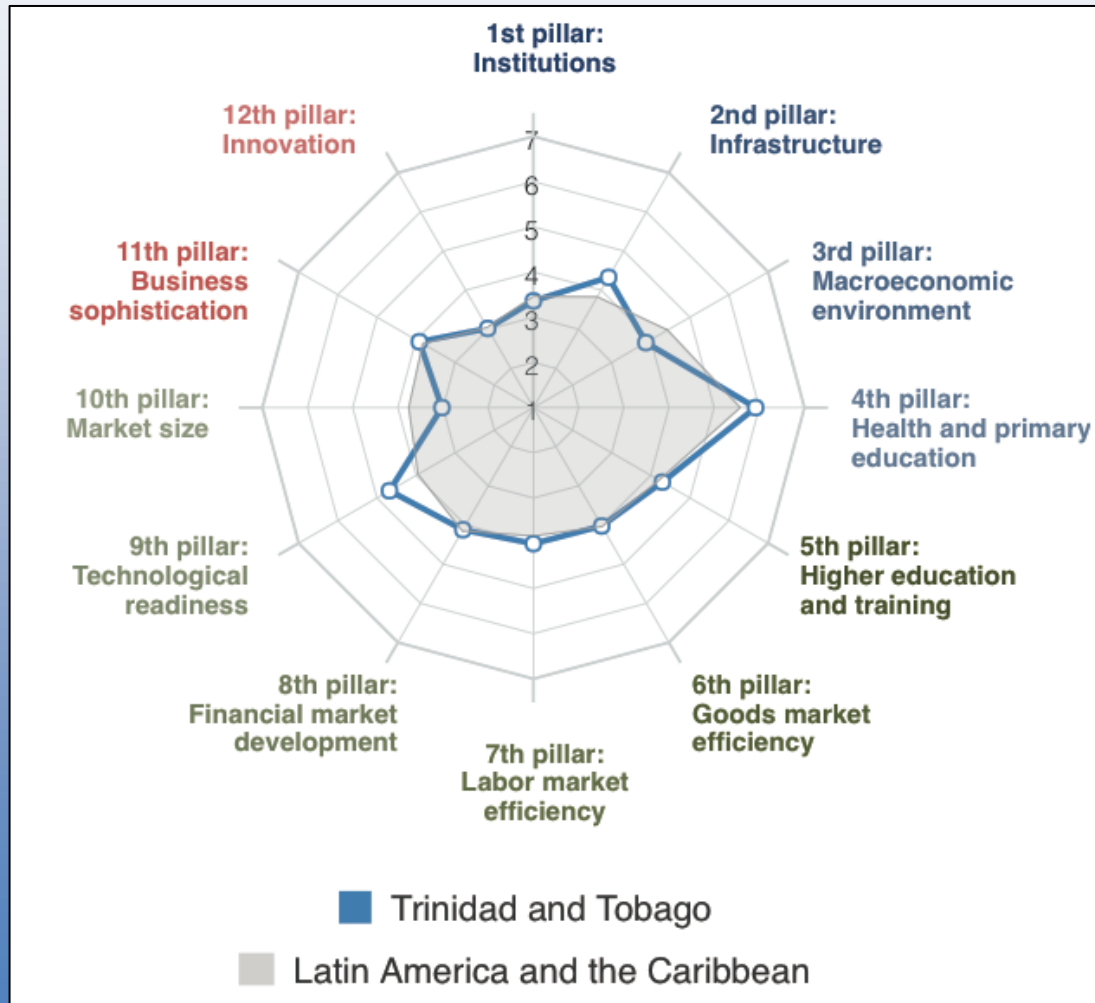
Firms compete-
not nations.

Government
largely responsible
for the raw
conditions





Global Competitiveness Report 2016-2017

Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	84 / 144	92 / 148	89 / 144	89 / 140	94 / 138



Sub-Indices & Pillars	2016 -2017		2015-2016		2014-2015	
	Rank	Score	Rank	Score	Rank	Score
Basic Requirements	82	4.4	62	4.6	52	4.8
1st pillar: Institutions	107	3.4	108	3.4	95	3.5
2nd pillar: Infrastructure	54	4.3	51	4.5	52	4.5
3rd pillar: Macroeconomic environment	114	3.9	54	4.9	38	5.4
4th pillar: Health and primary education	61	5.9	60	5.9	59	5.9
Efficiency Enhancers	76	4.0	78	3.9	81	3.9
5th pillar: Higher education and training	74	4.3	73	4.3	77	4.2
6th pillar: Goods market efficiency	103	4.0	104	4.1	101	4.1
7th pillar: Labor market efficiency	89	4.0	96	4.0	96	4.0
8th pillar: Financial market development	61	4.1	56	4.0	52	4.3
9th pillar: Technological readiness	50	4.7	59	4.2	64	4.0
10th pillar: Market size	99	3.0	102	3.0	112	2.9
Innovation and Sophistication Factors	83	3.5	81	3.5	88	3.5
11th pillar: Business sophistication	67	3.9	68	3.9	69	3.9
12th pillar: Innovation	105	3.0	101	3.1	100	3.0

	Rank / 138	Value	Trend
 1st pillar: Institutions	107	3.4	
1.01 Property rights	87	4.1	
1.02 Intellectual property protection	98	3.6	
1.03 Diversion of public funds	114	2.6	
1.04 Public trust in politicians	118	1.9	
1.05 Irregular payments and bribes	102	3.3	
1.06 Judicial independence	55	4.2	
1.07 Favoritism in decisions of government officials	134	1.9	
1.08 Wastefulness of government spending	107	2.5	
1.09 Burden of government regulation	87	3.2	
1.10 Efficiency of legal framework in settling disputes	106	3.0	
1.11 Efficiency of legal framework in challenging regs	95	3.0	
1.12 Transparency of government policymaking	80	4.0	
1.13 Business costs of terrorism	74	5.2	
1.14 Business costs of crime and violence	132	2.5	
1.15 Organized crime	116	3.8	
1.16 Reliability of police services	126	2.8	
1.17 Ethical behavior of firms	123	3.1	
1.18 Strength of auditing and reporting standards	83	4.3	
1.19 Efficacy of corporate boards	90	4.7	
1.20 Protection of minority shareholders' interests	111	3.6	
1.21 Strength of investor protection 0-10 (best)	36	6.3	



GEM Overview:

- Not for profit academic research consortium
- Mission: Contribute to economic development through entrepreneurship.
 - Research that:
 - Measures the level and characteristics of entrepreneurial activity within & across countries
 - Identifies the principal factors which encourage or hinder entrepreneurial activity
 - Provides guidance for formulation of effective & targeted policies to improve the quantity & quality of entrepreneurial activity.

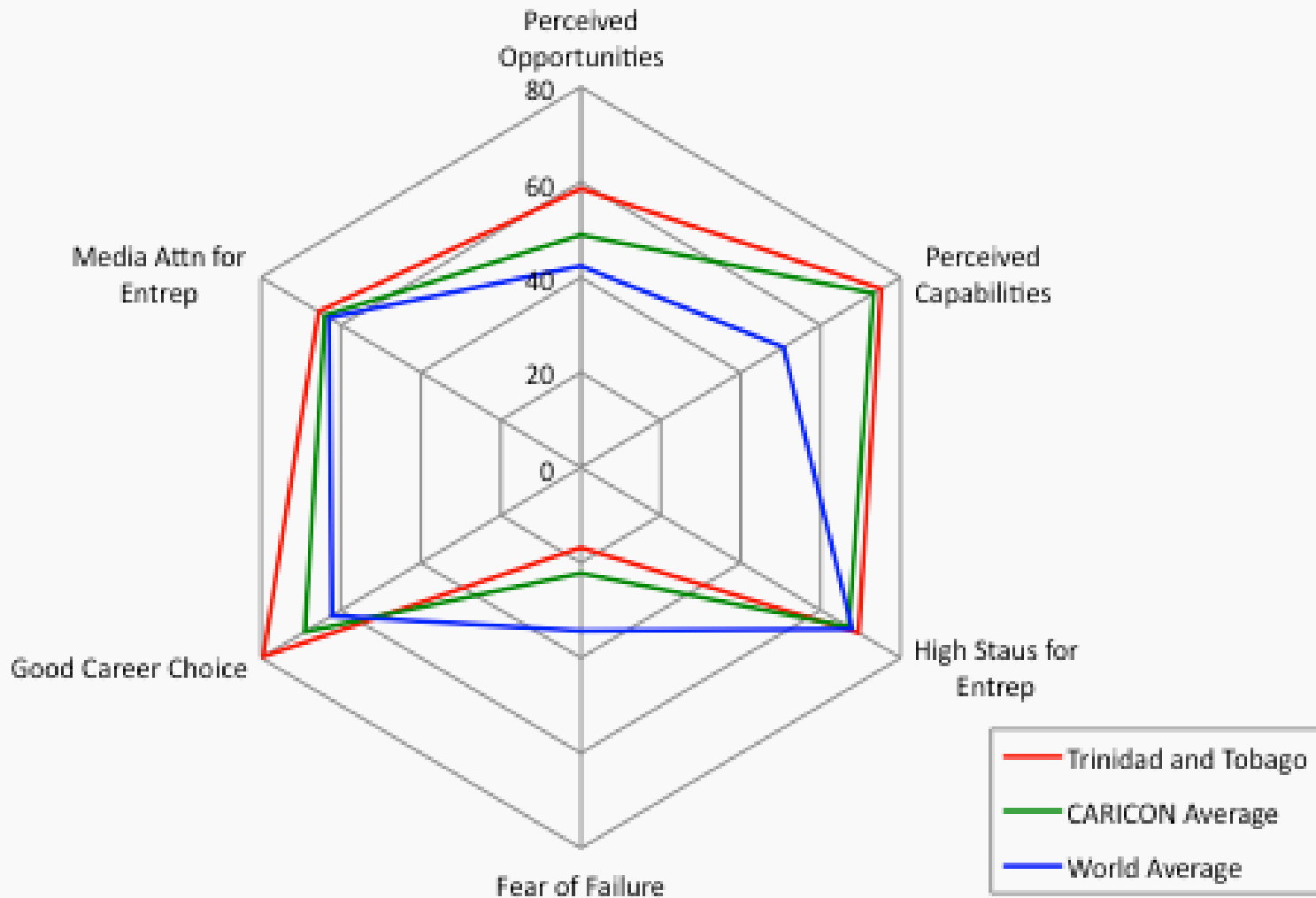
Global Entrepreneurship Monitor:

- Largest Study of entrepreneurial activity in the world.
- Unique Dataset:
 - Focus is on the individual, as opposed to firms
 - Perceptions, Aspirations, Intent
 - Includes informal sector
 - Captures pre-launch activity
 - Harmonized Approach to measurement and reporting
 - Allows for meaningful comparison between countries
 - Independent of local registration requirements & norms

Key Instruments

- APS
 - Minimum 2000 Adults
 - Entrepreneurial perceptions, aspirations, attitudes, intentions
 - Perceived opportunities, barriers, capabilities, fear of failure.
- NES
 - 36 Experts
 - Framework / Entrepreneurship Environment:
 - Gov't policies, programmes, infrastructure, culture etc.

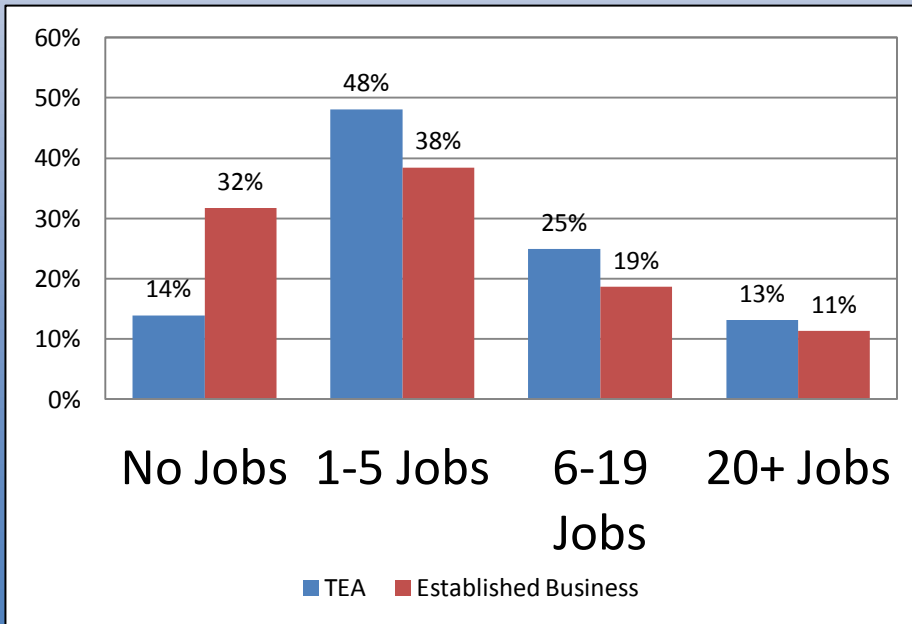
Attitudes and Perceptions



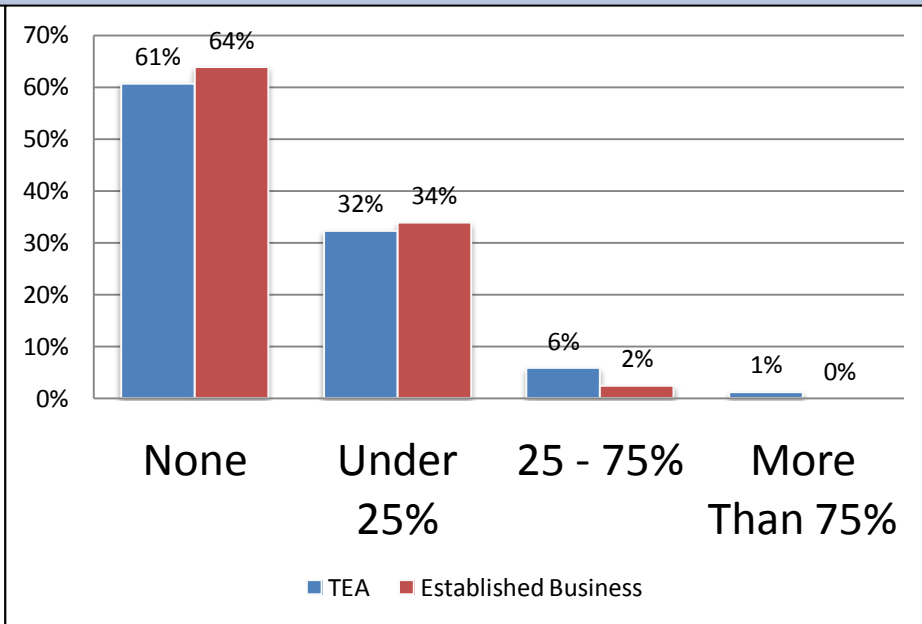
	Nascent Entrepreneurship Rate	New Business Ownership Rate	TEA	Established Business	Necessity Driven (% of TEA)	Opportunity Driven (% of TEA)
Argentina	9.5	5.2	14.4	9.1	28	43.5
Barbados	8.5	4.2	12.7	7.1	14.6	53.1
Belize	4.3	3	7.1	3.7	13.1	47.6
Bolivia	21.5	7.1	27.4	7.6	22.8	51.7
Brazil	3.7	13.8	17.2	17.5	29	57.8
Chile	16.6	11.1	26.8	8.8	17.6	62.2
Colombia	12.4	6.7	18.6	4.9	33.3	51.6
Costa Rica	7.6	3.7	11.3	2.5	19.3	63.5
Ecuador	24.5	9.9	32.6	17.7	29.4	35
El Salvador	11.4	8.7	19.5	12.7	32	54.5
Guatemala	12	9.2	20.4	7.4	40.6	38.9
Jamaica	7.9	11.9	19.3	14.4	32.1	33.5
Mexico	12.7	6.4	19	4.5	22.5	50
Panama	13.1	4.1	17.1	3.4	26.3	60.2
Peru	23.1	7.3	28.8	9.2	16.4	58.9
Puerto Rico	8.8	1.3	10	1.3	20.5	51.1
Suriname	1.9	0.2	2.1	5.2	5.4	39.8
Trinidad & Tobago	7.5	7.4	14.6	8.5	12	64.3
Uruguay	10.5	5.8	16.1	6.7	16	27.3
Unweighted Average	11.4	6.7	17.6	8.0	22.7	49.7

- The GEM Model: Performance on 3 Key Dimensions:
 - Growth Potential
 - Export Competitiveness
 - Innovation

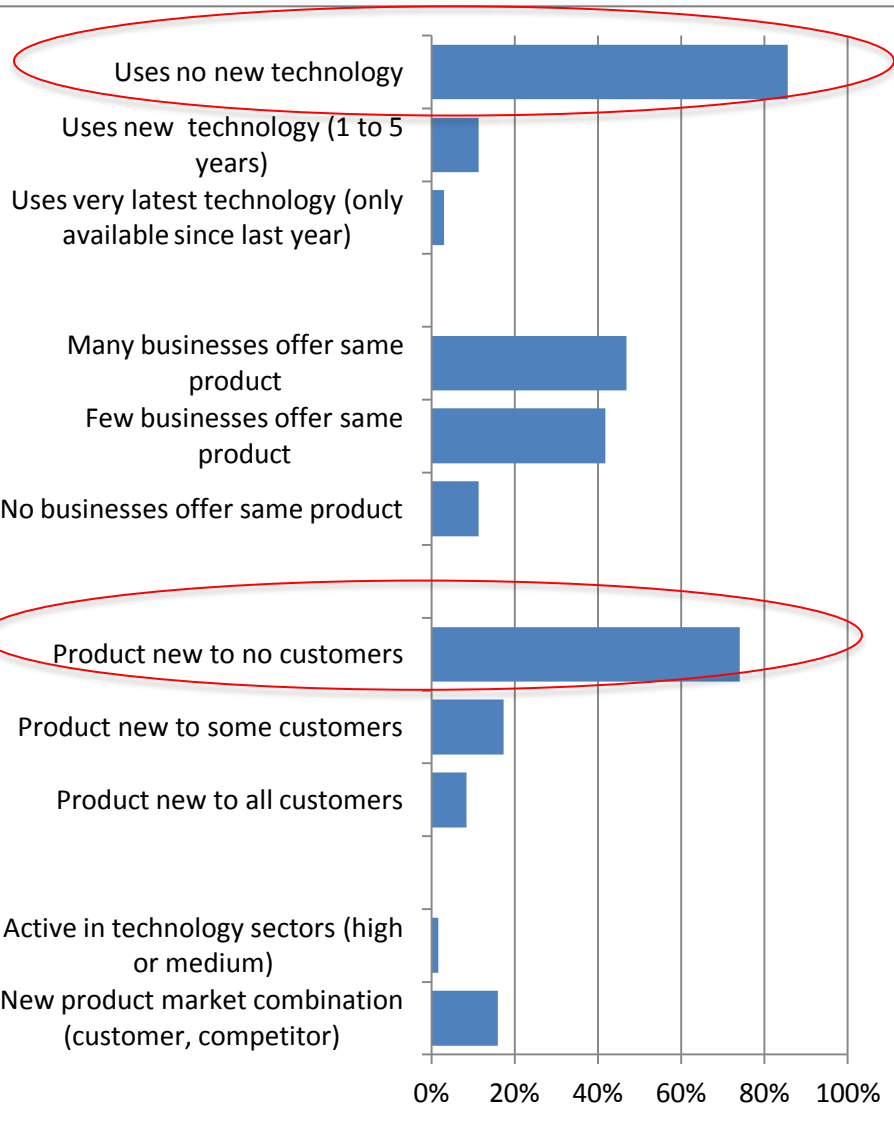
Performance : 5 yr Projected Growth and Job Creation



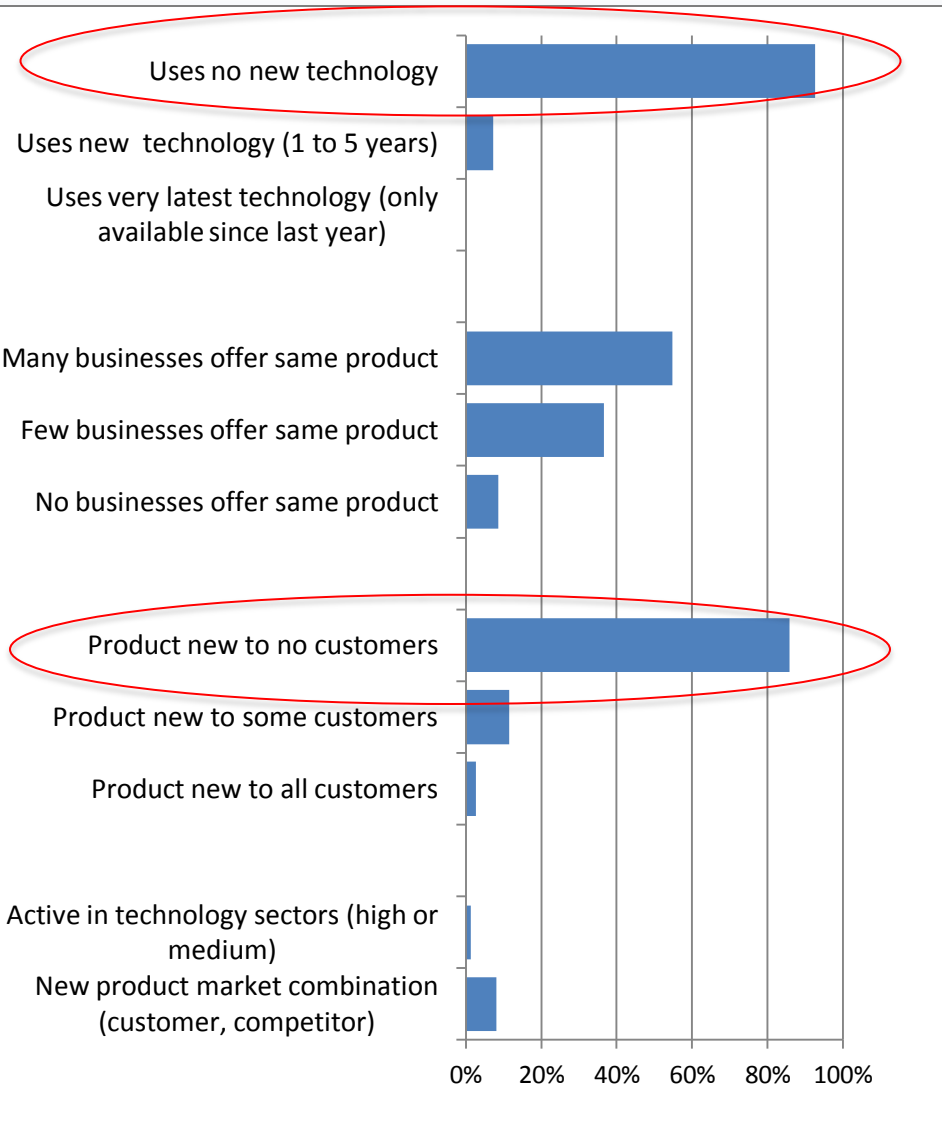
Performance : Int'l Orientation



Performance: Innovation












TEA



Established Firms

GCI on Innovation

 12th pillar: Innovation	105	3.0	
12.01 Capacity for innovation	110	3.7	
12.02 Quality of scientific research institutions	77	3.7	
12.03 Company spending on R&D	124	2.7	
12.04 University-industry collaboration in R&D	112	2.9	
12.05 Gov't procurement of advanced tech. products	120	2.7	
12.06 Availability of scientists and engineers	54	4.2	
12.07 PCT patent applications applications/million pop.	84	0.4	

- Availability of professionals produced by tertiary education system, but low capacity to innovate.

R&D Transfer

GCR:

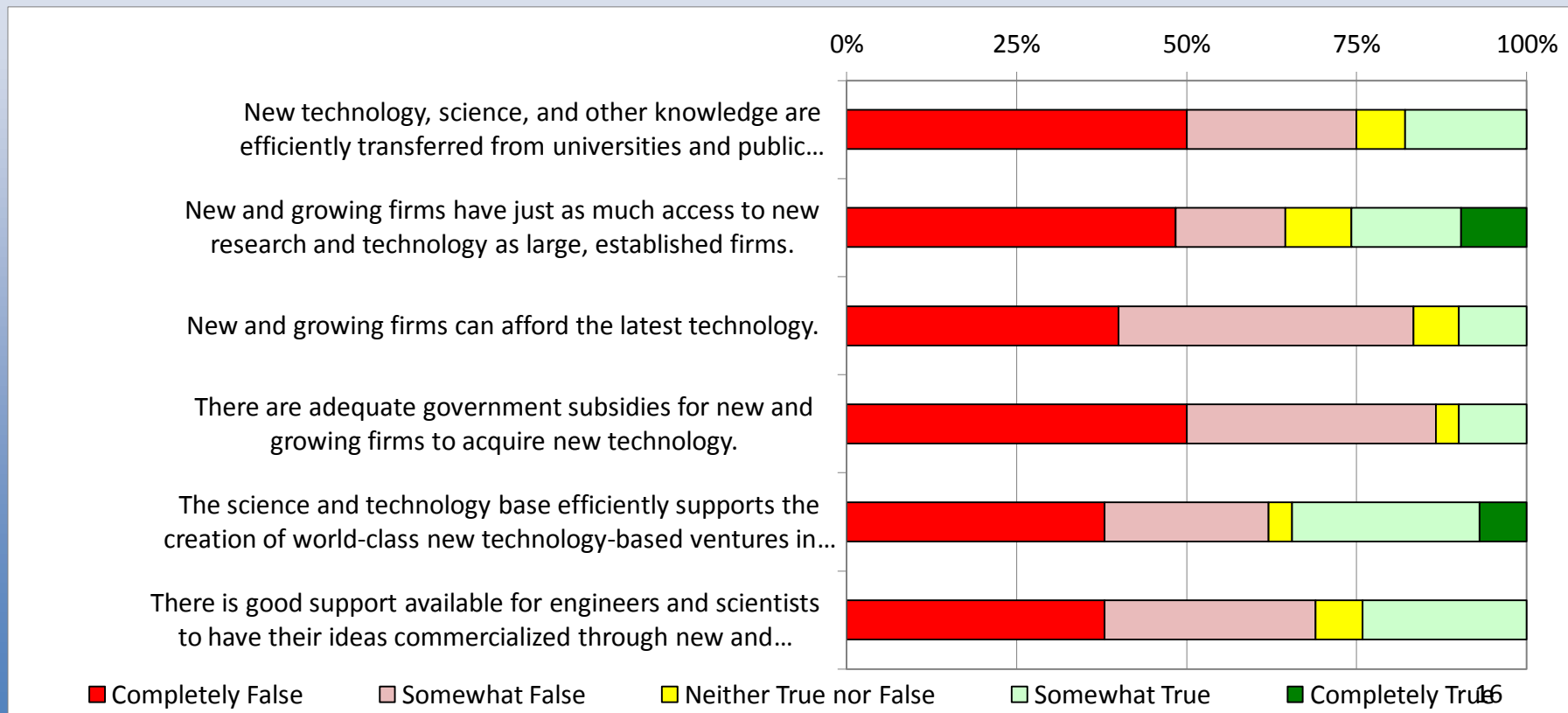
- Level of innovation is reduced by low level of collaboration between academia and industry: Exec survey: both sides 'blame' the other !

12.04 University-industry collaboration in R&D

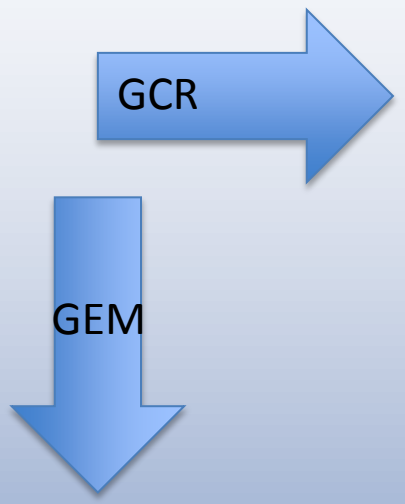
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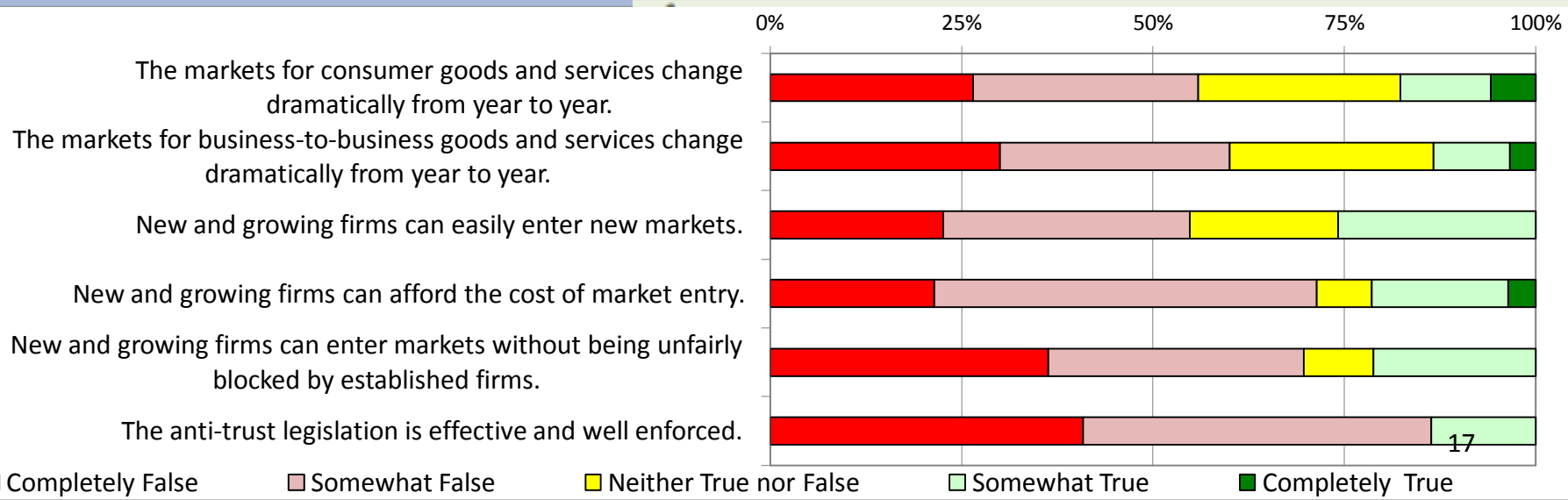
GEM



Goods Markets



	Rank / 138	Value	Trend
6th pillar: Goods market efficiency	103	4.0	
6.01 Intensity of local competition	58	5.2	
6.02 Extent of market dominance	118	3.1	
6.03 Effectiveness of anti-monopoly policy	119	3.0	
6.04 Effect of taxation on incentives to invest	35	4.1	
6.05 Total tax rate % profits	47	32.2	
6.06 No. of procedures to start a business	76	7	
6.07 Time to start a business days	71	11.5	
6.08 Agricultural policy costs	117	3.2	
6.09 Prevalence of non-tariff barriers	25	4.9	
6.10 Trade tariffs % duty	117	10.8	
6.11 Prevalence of foreign ownership	75	4.4	
6.12 Business impact of rules on FDI	52	4.8	
6.13 Burden of customs procedures	124	3.2	
6.14 Imports % GDP	65	44.4	
6.15 Degree of customer orientation	136	3.3	
6.16 Buyer sophistication	72	3.4	

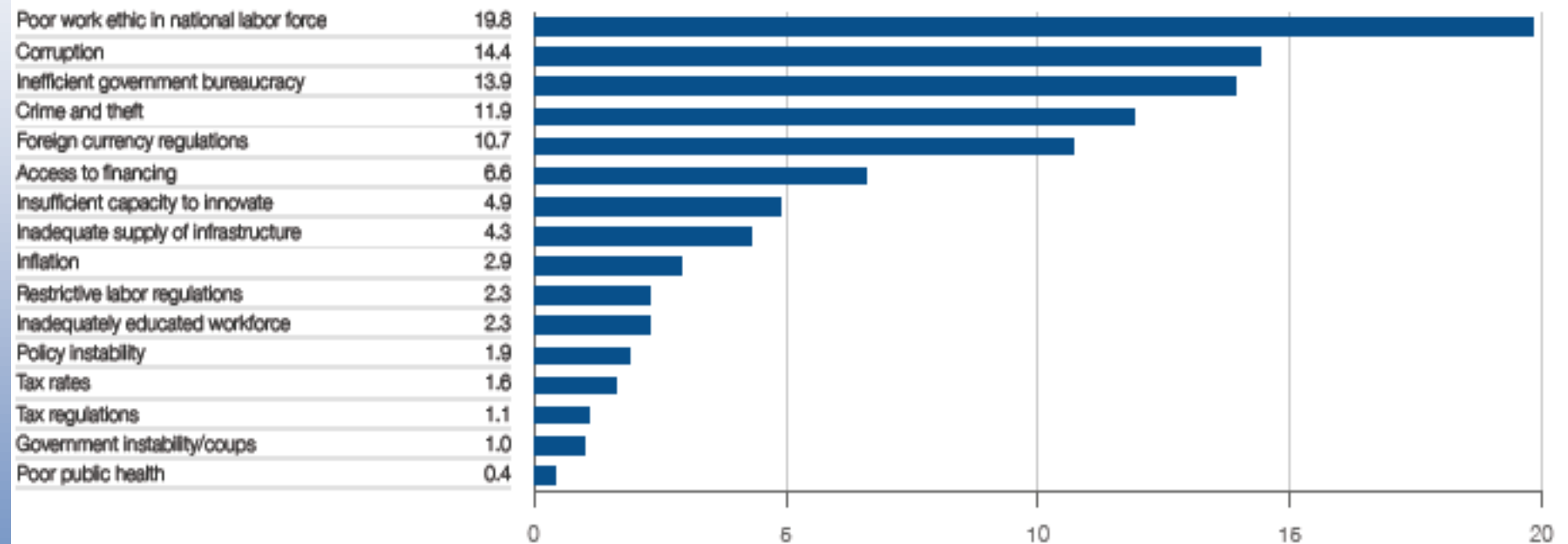


Insights: Institutional Framework

- GCR:

Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2016



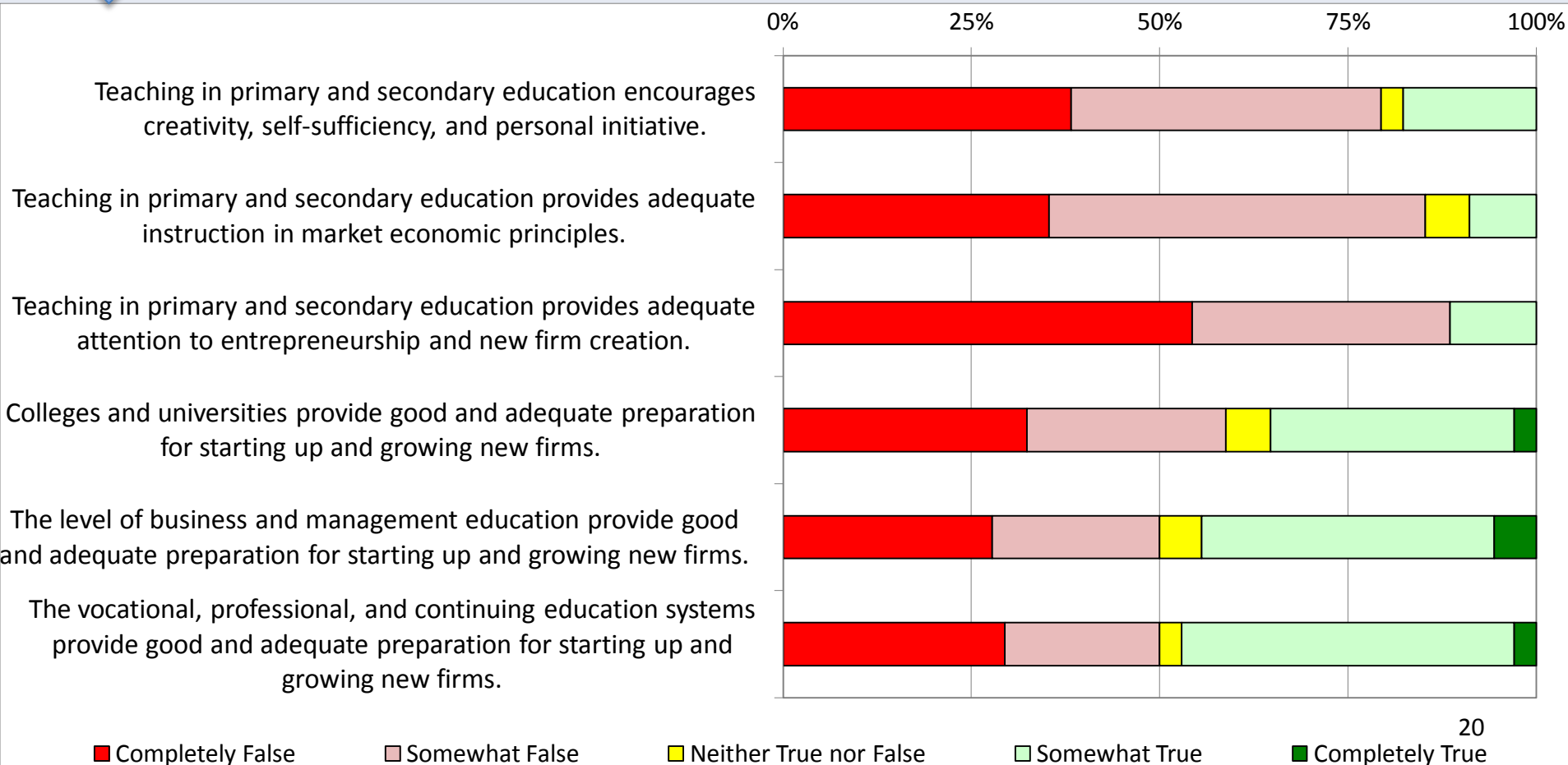
The Education System

- The Education System contributes to innovation, diversification and development in several ways:
 - Develops Human Capital
 - Standards for training/accreditation
 - Directs R&D activity
 - Influence on the evolving society:
 - Sociological & social dynamics
 - Norms, expected behaviours; culture
 - Attitudes towards work, entrepreneurship/career

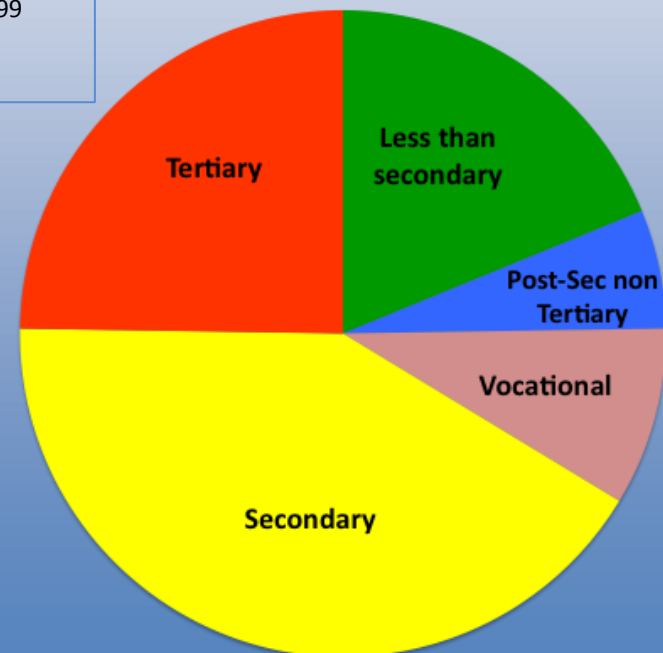
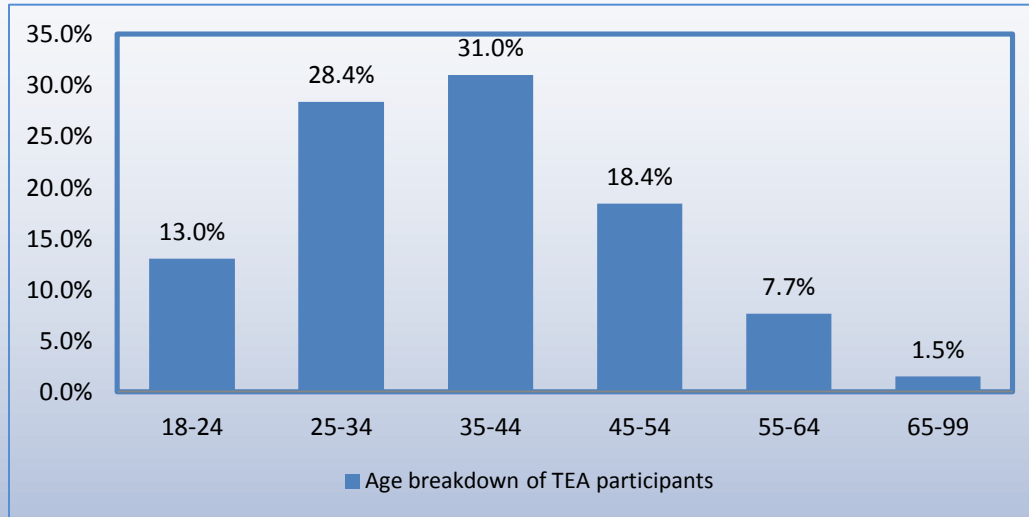
Education



5th pillar: Higher education and training	74	4.3	
5.01 Secondary education enrollment rate gross %	86	85.5	
5.02 Tertiary education enrollment rate gross %	110	12.0	
5.03 Quality of the education system	38	4.4	
5.04 Quality of math and science education	31	4.8	
5.05 Quality of management schools	33	4.9	
5.06 Internet access in schools	66	4.3	
5.07 Local availability of specialized training services	36	5.0	
5.08 Extent of staff training	53	4.1	



GEM: Profile of the Entrepreneur



Insights: Government in the Economy

- GCR:
 - Private sector distracted by allure of gov't contracts.
- GEM:
 - “Low hanging fruit” in replicative and gov't contract businesses.

National Culture

- T&T: Low capacity to innovate (GCR & GEM).
- Question: Where does this problem lie?
 - Do we possess:
 - Imagination to innovate?
 - Technical skill to innovate?
- Hofstede & Hofstede (2005). T&T:
 - Low Uncertainty Avoidance:
 - Great for creativity
 - Bad for implementation

Recommendations

- Recognize the barrier to diversification brought about by low hanging fruit:
 - Gov't contracts
 - Transfers
 - Opportunities for replicative businesses
- Initiatives to overcome this:
 - Refocus incubator & support programmes to high growth, potentially export competitive, innovative firms.
- Agencies to support entrepreneurship:
 - Streamline- eliminate 'competition' and duplication.

Recommendations

- Profile of the entrepreneur:
 - Examine the incentives that actually—or can potentially divert activity away from innovative, high growth potential endeavours.

Recommendations

- Recognize the strengths and weaknesses of T&T in the innovation chain.
- Use institutions to:
 - Harness the creativity & ingenuity of the people
 - Channel this towards developmental, productive enterprise.

Thank You !