

The Eighth Annual **RESEARCH FORUM**

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Contribution of Scientific Research
to Sustainable Development

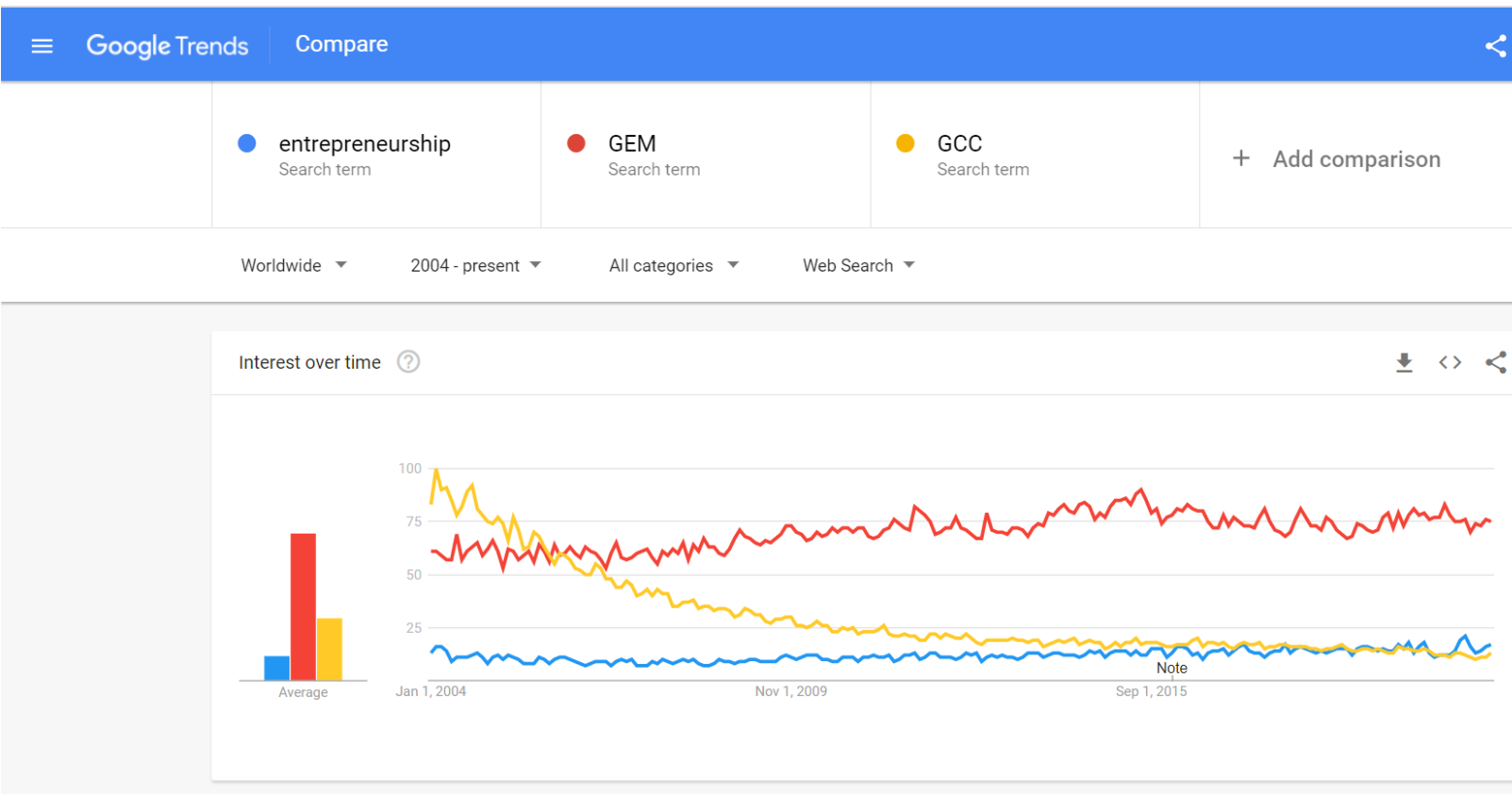
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Streamed via Microsoft Teams

GCC Entrepreneurship
in GEM data:

Country and Gender
Outlook of
Entrepreneurship
Indicators

JALAL NASER
Principal Consultant –
JAFCON

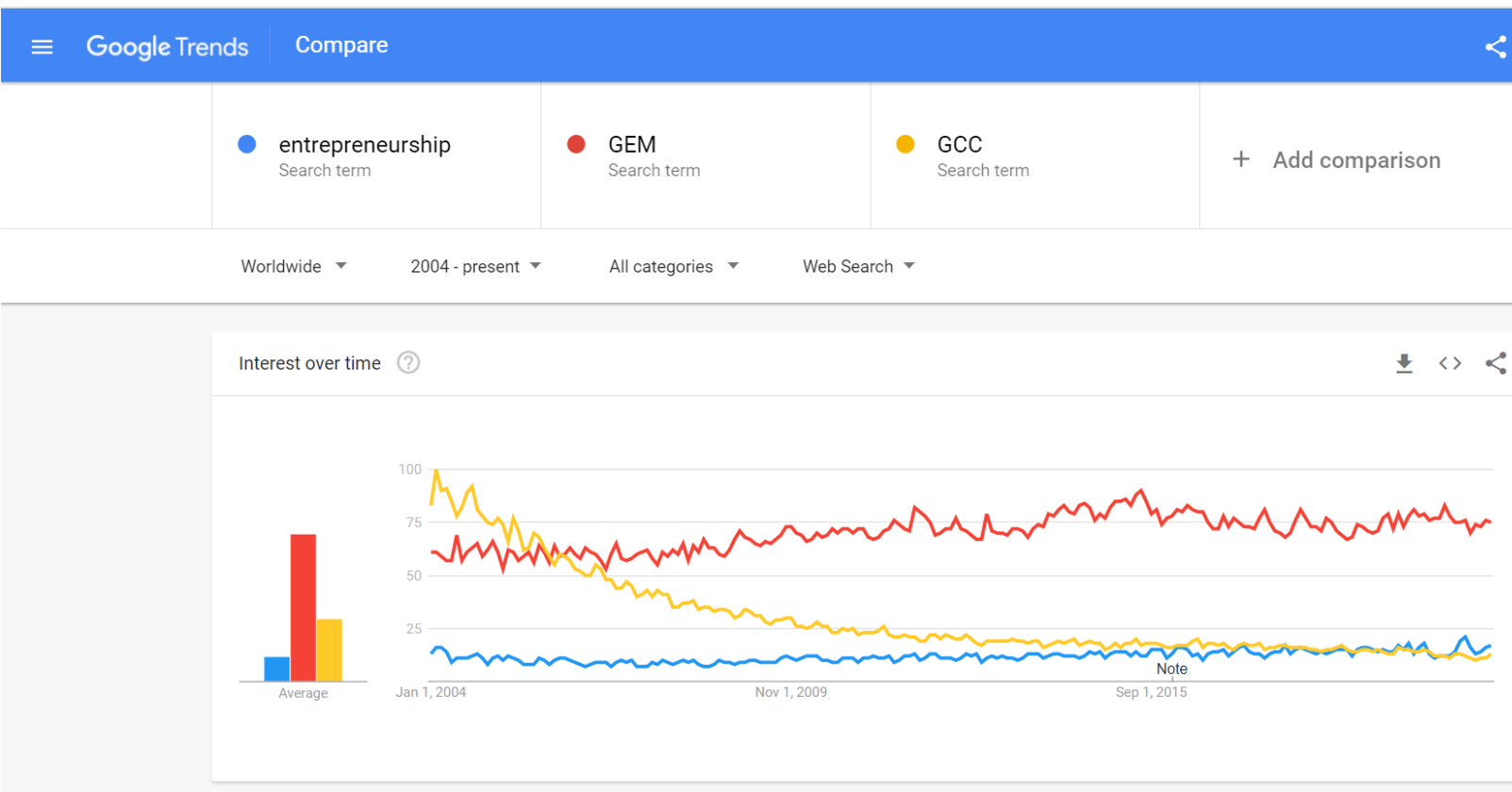
Curiosity and Motive (1)



- Curiosity of the search terms based on Google Trends from 2004 to 36 hours before 5th March 2021
- Global Entrepreneurship Monitor (GEM) had an increasing search curiosity trend higher than entrepreneurship search term and GCC search term. Entrepreneurship had a lower yet increasing search curiosity but GCC had a decreasing search curiosity over time where it is the lowest in relative to the other search terms.

Data source: Google Trends on 5th March 2021 (<https://www.google.com/trends>)

Curiosity and Motive (2)



- Motive is to explore the GCC GEM data sets of the year 2016
- Derive insights related to entrepreneurship outlook in the GCC countries: Saudi Arabia, United Arab Emirates and Qatar
- Compare the entrepreneurship GEM variables in these countries
- Compare the entrepreneurship GEM variables by gender in these countries

Data source: Google Trends on 5th March 2021 (<https://www.google.com/trends>).

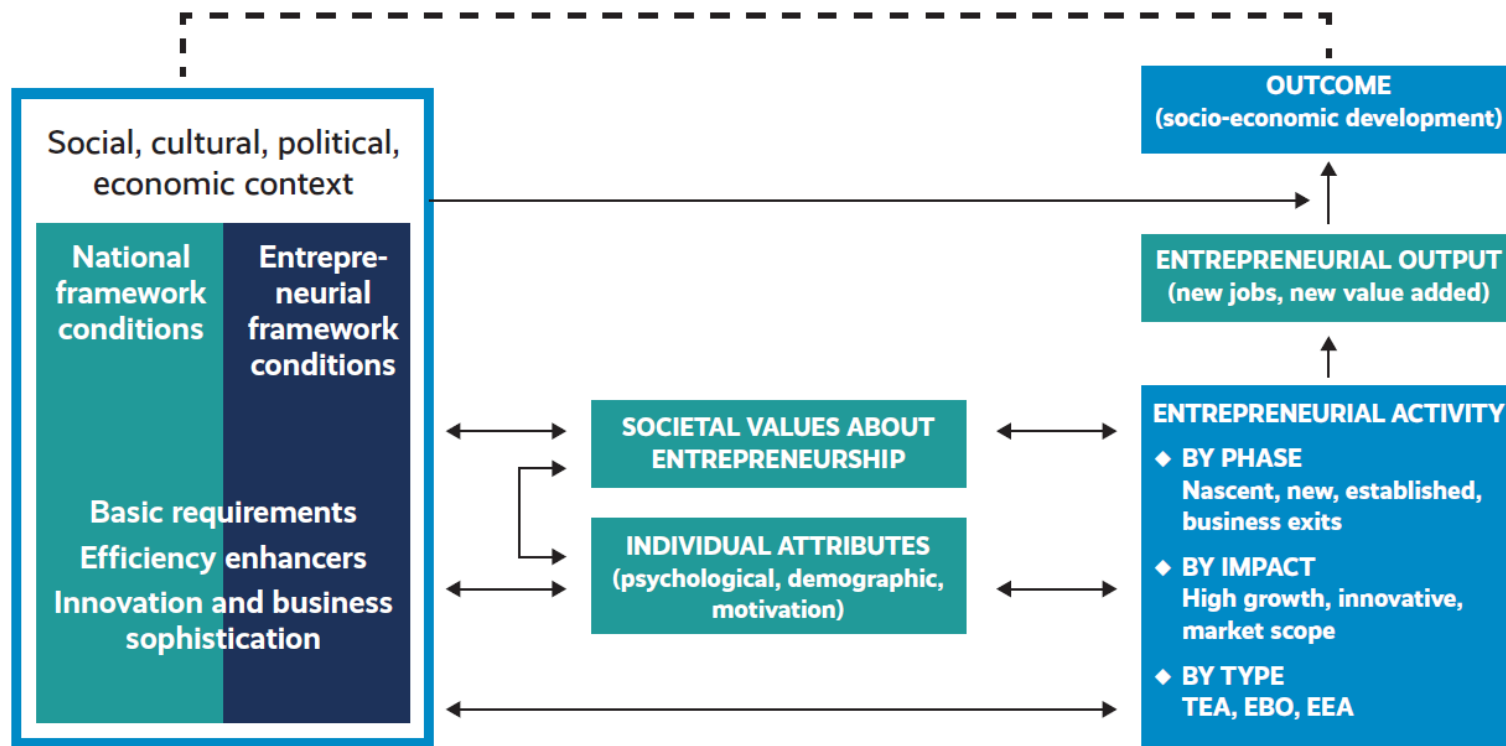
Abstract

- GEM dataset of the year 2016 (between 7th January to 31st August) included three GCC countries they are: Saudi Arabia (4053: 55.3% male vs. 44.7% female), United Arab Emirates (2012: 66.2% male vs. 33.8% female) and Qatar (3010: 79.7% male vs. 20.3% female). The total sample of these GCC countries was 9075 respondents (65.8% male vs. 34.2% female). GEM survey was mainly conducted as Mobile/fixed-phone line (56.7%) followed by face-to-face (43.3%).
- IBM SPSS version 26 was the statistical software used to analyze GEM data at descriptive level and at inferential level. The statistical significance levels considered were 5% and 1%.
- GEM variables analyzed included: Overview, Ease of starting a business, Entrepreneurial Attitudes, Informal Investors, Impactful Entrepreneurship, Visibility of social entrepreneurship, Exit and Discontinuation for between and within effects due to country and gender.
- 13 entrepreneurial indicators were found to have a statistically significant percentage inequality with country except for social entrepreneurship which found to have no statistically significant percentage inequality at 5% significance level, based on Chi square test findings. A country or between countries effect was revealed.
- Controlling for male, all entrepreneurial indicators were found to have a statistically significant percentage inequality across countries.
- Controlling for female, 12 entrepreneurial indicators were found to have a statistically significant percentage inequality across countries except for: Improvement-Driven Opportunity (IDO) Motives and Individual involvement in entrepreneurial activity
- GCC entrepreneurship outlook informs policy makers and entrepreneurs.
- Bahrain is the only GCC country which did not conduct GEM. Do it. Use it.

Objective

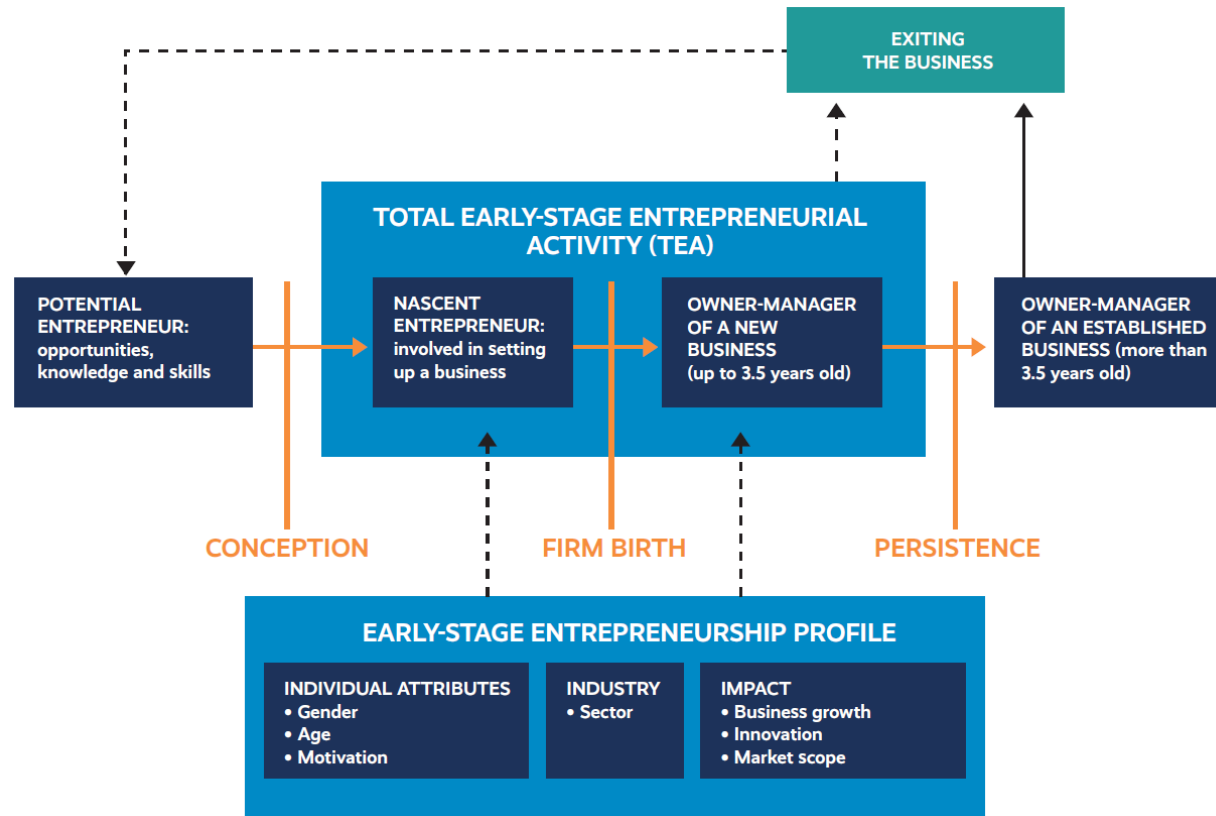
- To uncover the entrepreneurship outlook in the GCC based on the most available GEM dataset
- To test for percentage equality between GCC countries (similar or varying)
- To test for percentage equality within GCC countries controlling for gender

GEM – Conceptual Framework



Source: GEM Global Report 2019/2020 (https://www.researchgate.net/profile/Stephen-Hill-16/publication/339830886_GEM_Global_Report_20192020/links/5e67eb299bf1744f729337/GEM-Global-Report-2019-2020.pdf)

GEM – Entrepreneurial phases and GEM entrepreneurship indicators



Source: GEM Global Report 2019/2020 (https://www.researchgate.net/profile/Stephen-Hill-16/publication/339830886_GEM_Global_Report_20192020/links/5e67ebef299bf1744f729337/GEM-Global-Report-2019-2020.pdf)

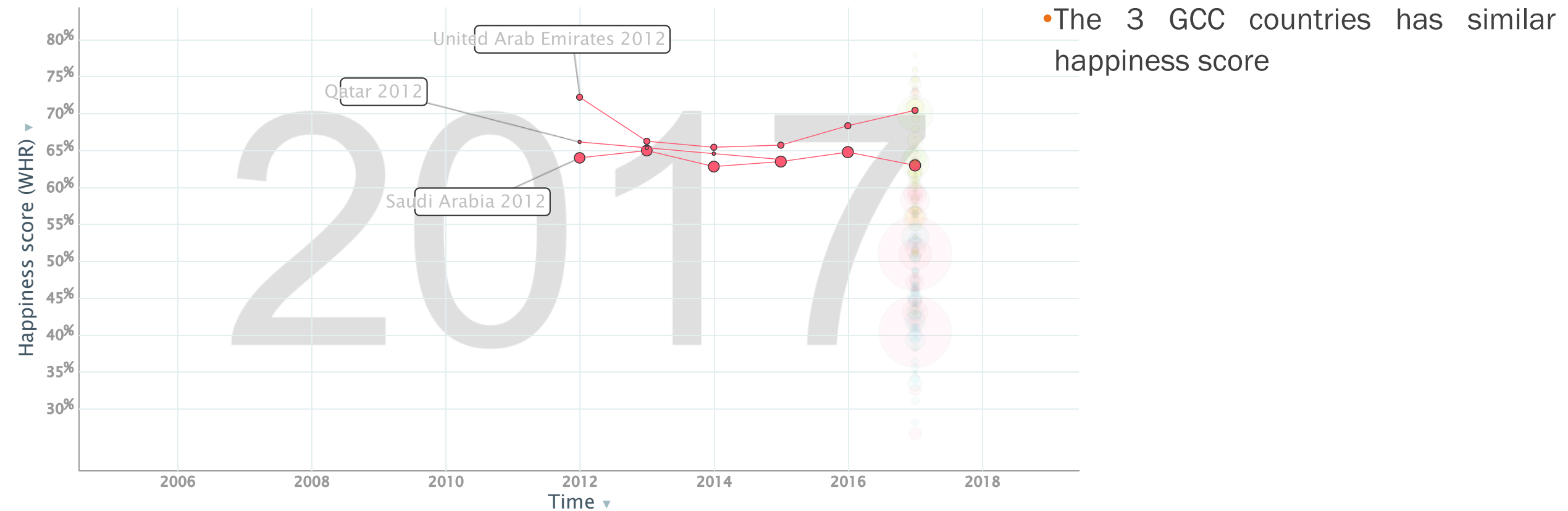
GCC: Geography, Economy and Culture Characteristics

- Although these nine countries fall within the same geographic region, they are diverse in terms of social and economic development, as indicated in Table 1 (reproduced from GEM Middle East and North of Africa 2017; source: <https://gemorg.bg/wp-content/uploads/2018/02/gem-2017-mena-report-1511260863.pdf>)

Efficiency-driven economies	Innovation-driven economies
Saudi Arabia	Qatar, UAE

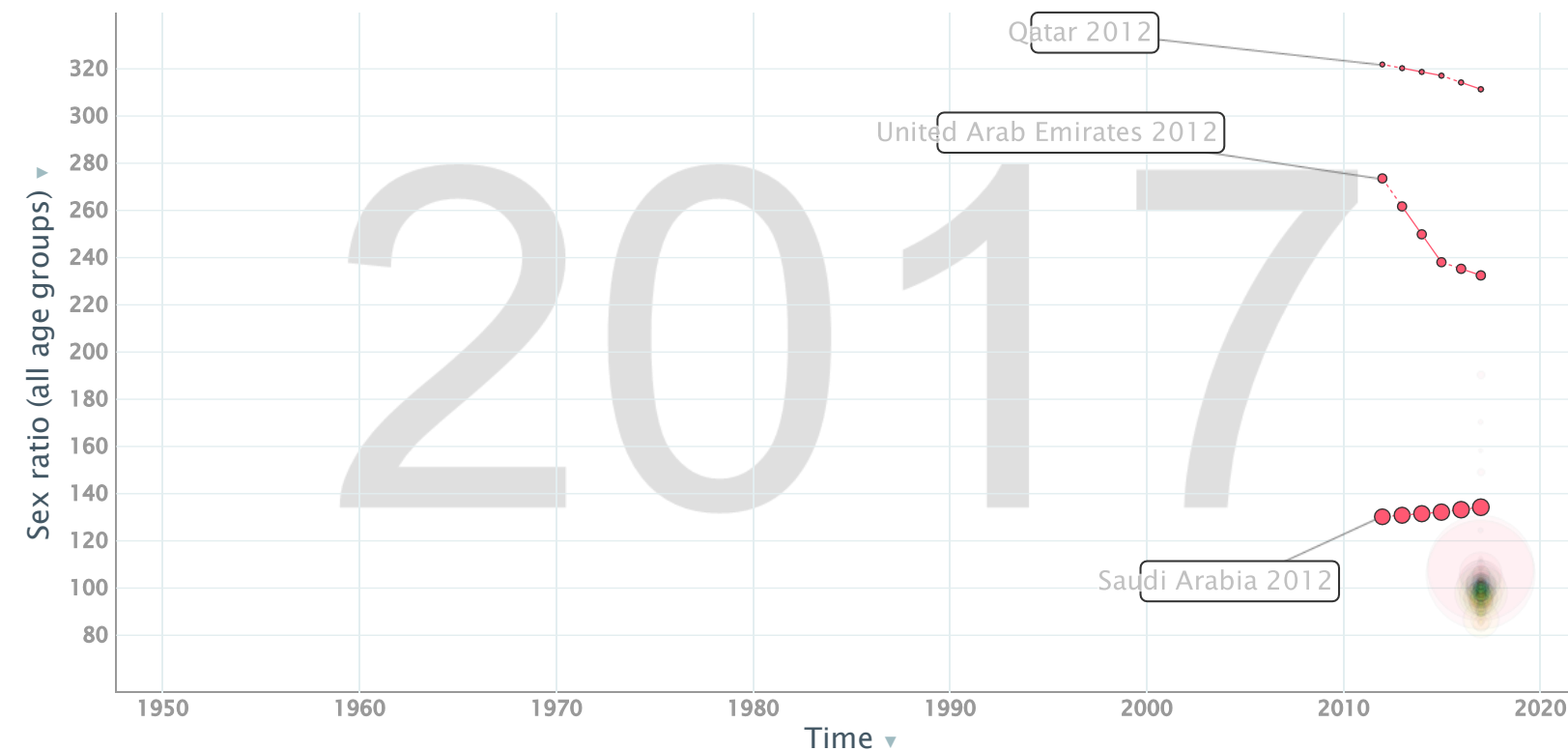
- The 3 GCC countries belong to high-income economies as classified by World Economic Forum (GEM 2019/2020 Global Report); belong to very high human development index (<http://hdr.undp.org/en/composite/HDI>)
- They share similarities in the culture, quality of living and values.

GCC: Happiness Score



Source: Gapminder.org

GCC: Sex Ratio



- Qatar and UAE have a declining sex ratio, while Saudi Arabia has a growing sex ratio
- Sex ratio: male divided by female, per 100 among total population of all age groups

Source: Gapminder.org

Previous researches (1)

- Cinar E. M., Hienkel T., Horwitz W. (2019) conducted comparison analysis between North Mediterranean and North African countries using GEM data. They found gender does make a difference in entrepreneurial activities where North African females are found to be less entrepreneurial than all males as well as the counterpart females in Northern MED countries.
- Holienka M., Jančovičová Z., Kovačičová Z. (2006) studied Visegrad countries (i.e. Czech Republic, Hungary, Slovakia and Poland) with evidence from GEM data that aimed at analyzing women entrepreneurship drivers. Policy makers should put on measures supporting opportunity recognition, entrepreneurial skills and knowledge, networking and fear of failure reduction if they wish to foster opportunity-driven activities among women. Or they should improve business skills, support formal and informal business networks formation, and increase failure tolerance, if they prefer entrepreneurship and economic self-sufficiency as a way out of necessity.
- Dheer R. J.S., Li M., Treviño L. J. (2019) worked out an integrative approach to the gender gap in entrepreneurship across nations using GEM data and World Value Survey data. Women and men differ pan-culturally in their likelihood to start new ventures. This gap varies considerably across nations, suggesting that environmental factors play a role in explaining it. Their findings suggest that policies designed to encourage female entrepreneurship should not be divorced from the environment in which they are implemented. Public officials should also aim to minimize the social bias that portrays women as less capable than men when it comes to independently starting business ventures.

Previous researches (2)

- Canestrino R. et al. (2020) investigated the cultural drivers of social entrepreneurship using Global Leadership and Organizational Behaviour Effectiveness (GLOBE) and GEM data. Cross-cultural analysis confirms the impact of culture on both individuals' and firms' propensity to devote to social concerns. Their research results suggest that culture is not sufficient to justify national differences in social entrepreneurship rates.
- Pathak S., Muralidharan E. (2021) empirically tested a theory-based model using GEM data supplemented with World Value Survey data, where consequences of cross-cultural differences effect on the likelihood of individual level entrepreneurship was studied. Policy makers should attempt to improve living conditions justifies human well-being such as housing, electricity, water, employment, etc., along with establishing effectiveness of formal institutions that directly promotes entrepreneurship.
- Voda A. I., Butnaru G. I., Butnaru R. C. (2020) conducted analysis using GEM individual data about enablers of entrepreneurial activity across the European Union. Four perceptual determinants were found: capability to identify opportunity; having the skills, knowledge and experience to start up a business; fear of failure; and knowing other entrepreneurs. Gender was an important determinant which affects the probability to engage in entrepreneurial activities, where men being more inclined to such engagement than females.

Previous researches (3)

- Sánchez-Escobedo M. C. et al. (2016) analyzed the situation and development of research in “entrepreneurship” from a gender perspective that has used GEM data in the period from 1999 to 2015. Among the main findings of this study is that GEM has advanced in recent years; however from a gender perspective it is in the initial phase, requiring more researchers to be involved, filling the gaps related to topics, macro analysis, or the use of GEM data at both global and regional levels. The three components researched most where: entrepreneurial activity, entrepreneurial process and aspirations. USA was the country with the highest number of papers in gender publications, followed by Spain, Chile, Colombia and UK. Taking into account that most entrepreneurship variables are binary (with responses 0/1), the analysis used in most articles are descriptive and logistics, binomial or multinomial regression.
- Tsyganova T., Shirokova G. (2010) explored gender differences in efficiency-driven countries based on the GEM data. An important findings by the authors is that training on starting a new business as a common factor, has a greater influence on female entrepreneurial activity. The policy implication that follows this findings is that training should be considered as essential issue when designing government policies and stimulating entrepreneurial activity.
- No published article was found studying GCC GEM data, to the best of the author knowledge and search exerted efforts.

Methodology

- Data source: GEM (2016); <https://www.gemconsortium.org/data/sets?id=aps>
- Country and Gender demographic variables considered
- 14 entrepreneurial indicators considered:
 1. Fear of failure
 2. Career choice
 3. Ease of startup
 4. Social entrepreneurship
 5. Innovation
 6. Competition
 7. Technological innovation
 8. Internationalization
 9. Improvement-Driven Opportunity (IDO) Motives
 10. Individual involvement in entrepreneurial activity
 11. Individual identified as involved in the entrepreneurial process
 12. Reasons for existing business (if exited)
 13. Individual involvement in entrepreneurial activity (provided funds)
 14. Relationship with entrepreneur who received funds
- Descriptive analysis
 - Single variable tabulation
 - Crosstabulation
 - Visualization
- Inferential analysis
 - Can we generalize or the findings in the sample is due to chance only? Significant or not?
 - Bivariate analysis using Chi square test for percentage equality, where:
 - Country is one variable, controlled for Gender
 - GEM entrepreneurship indicator (14) is the other variable

GEM Entrepreneurial Indicators

GEM main part	GEM sub-part	Short version	Full version
Entrepreneurial Attitudes	entrepreneurial attitudes	Fear of failure	Would fear of failure would prevent you from starting a business?
Entrepreneurial Attitudes	entrepreneurial attitudes	Career choice	In my country, most people consider starting a new business a desirable career choice.
Ease of starting a business	Perceived behavioral control towards entrepreneurship	Ease of startup	In my country, it is easy to start a business.
Visibility of social entrepreneurship	Social entrepreneurship/ Social welfare	Social entrepreneurs hip	In my country, you will often see businesses that primarily aim to solve social problems.
Entrepreneurial activity indicators by impact/Impactful Entrepreneurship	Innovativeness/Innovation	Innovation	Will all, some, or none of your potential customers consider this product or service new and unfamiliar?
Entrepreneurial activity indicators by impact/Impactful Entrepreneurship	Innovativeness/Innovation	Competition	Right now, are there many, few, or no other businesses offering the same products or services to your potential customers?
Entrepreneurial activity indicators by impact/Impactful Entrepreneurship	Innovative Orientation/Innovativeness/Innovation	Technological innovation	How long have the technologies or procedures used for this product or service been available?

GEM main part	GEM sub-part	Short version	Full version
Entrepreneurial activity indicators by impact/Impactful Entrepreneurship	Internationalization	Internationalization	What percentage of your annual sales revenues will usually come from customers living outside your country?
Entrepreneurial activity indicators by impact/Impactful Entrepreneurship	Improvement-Driven Opportunity (IDO) Motives	Improvement-Driven Opportunity (IDO) Motives	Which do you feel, is the most important motive for pursuing this opportunity?
Overview	Individual involvement in entrepreneurial activity	Individual involvement in entrepreneurial activity	Are you, alone or with others, currently the owner of a business you help manage, self-employed, or selling any goods or services to others?
Overview	Individuals identified as involved in the entrepreneurial process	Individuals identified as involved in the entrepreneurial process	Do you personally own all, part, or none of this business?
Exit and Discontinuation	Reasons for exiting business (if exited)	Reasons for exiting business (if exited)	What was the most important reason for quitting this business?
Informal Investors	Individual involvement in entrepreneurial activity (provided funds)	Individual involvement in entrepreneurial activity (provided funds)	Have you, in the past three years, personally provided funds for a new business started by someone else, excluding any purchases of stocks or mutual funds?
Informal Investors	Relationship with entrepreneur who received funds	Relationship with entrepreneur who received funds	What was your relationship with the person that received your most recent personal investment?

Source: GEM

GEM Entrepreneurial Indicators

Abbreviated version	Short version	Full version	Categories and codes	Abbreviated version	Short version	Full version	Categories and codes	Abbreviated version	Short version	Full version	Categories and codes
1. fearfail	Fear of failure	Would fear of failure would prevent you from starting a business?	No = 0 Yes = 1	7. sunewtec	Technological innovation	How long have the technologies or procedures used for this product or service been available?	Less than a year = 1 Between one to five years = 2 Longer than five years = 3	12. exreason	Reasons for exiting business (if exited)	What was the most important reason for quitting this business?	An opportunity to sell the business = 1 The business was not profitable = 2 Problems getting finance = 3 Another job or business opportunity = 4 The exit was planned in advance = 5 Retirement = 6 Family or personal reasons = 7 An incident = 8 Other = 9 Government/tax policy/bureaucracy = 11
2. Nbgoodc	Career choice	In my country, most people consider starting a new business a desirable career choice.	No = 0 Yes = 1	8. suexport	Internationalization	What percentage of your annual sales revenues will usually come from customers living outside your country?	More than 90% = 1 76 to 90% = 2 51 to 75% = 3 26 to 50% = 4 11 to 25% = 5 10% or less = 6 None = 7	13. busang	Individual involvement in entrepreneurial activity (provided funds)	Have you, in the past three years, personally provided funds for a new business started by someone else, excluding any purchases of stocks or mutual funds?	No = 0 Yes = 1
3. Easystart	Ease of startup	In my country, it is easy to start a business.	No = 0 Yes = 1	9. Suoptype	Improvement-Driven Opportunity (IDO) Motives	Which do you feel, is the most important motive for pursuing this opportunity?	Greater independence = 1 Increase personal income = 2 Just to maintain income = 3 None of these = 4				
4. Nbsocent	Social entrepreneurship	In my country, you will often see businesses that primarily aim to solve social problems.	No = 0 Yes = 1	10. ownmge	Individual involvement in entrepreneurial activity	Are you, alone or with others, currently the owner of a business you help manage, self-employed, or selling any goods or services to others?	No = 0 Yes = 1				
5. Sunewcst	Innovation	Will all, some, or none of your potential customers consider this product or service new and unfamiliar?	All = 0 Some = 1 Non will consider this new and unfamiliar = 3	11. omown	Individuals identified as involved in the entrepreneurial process	Do you personally own all, part, or none of this business?	All = 1 Part = 2 None = 3	14. barel	Relationship with entrepreneur who received funds	What was your relationship with the person that received your most recent personal investment?	Close family member = 1 Some other relative = 2 A work colleague = 3 A friend or neighbor = 4 A stranger with a good business idea = 5 Other = 6
6. sucompet	Competition	Right now, are there many, few, or no other businesses offering the same products or services to your potential customers?	Many business competitors = 1 Few business competitors = 2 No business competitors = 3								

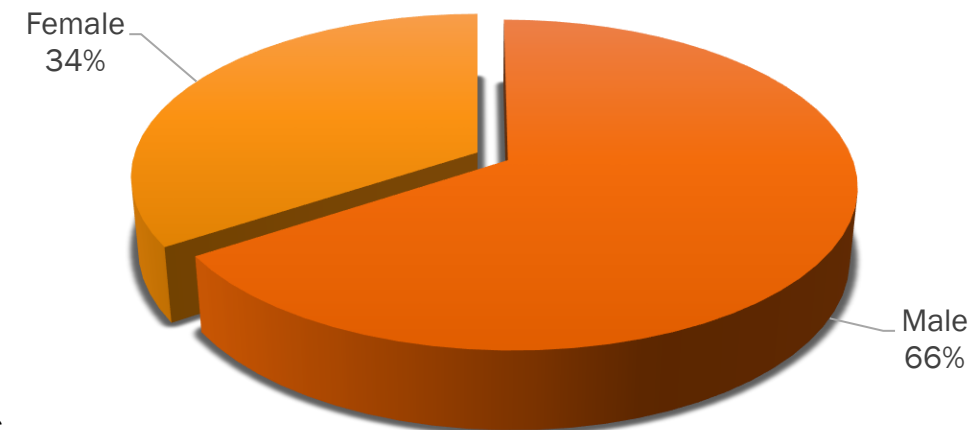
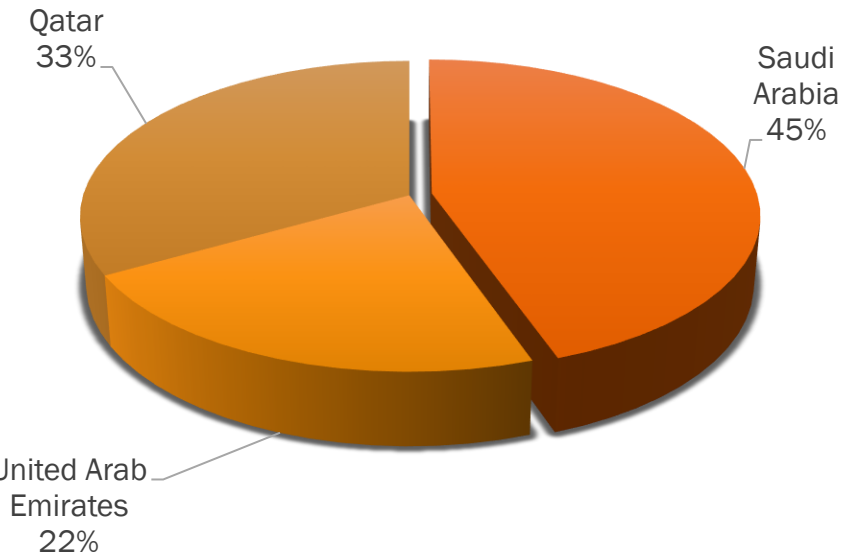
Source: GEM

Respondents Description

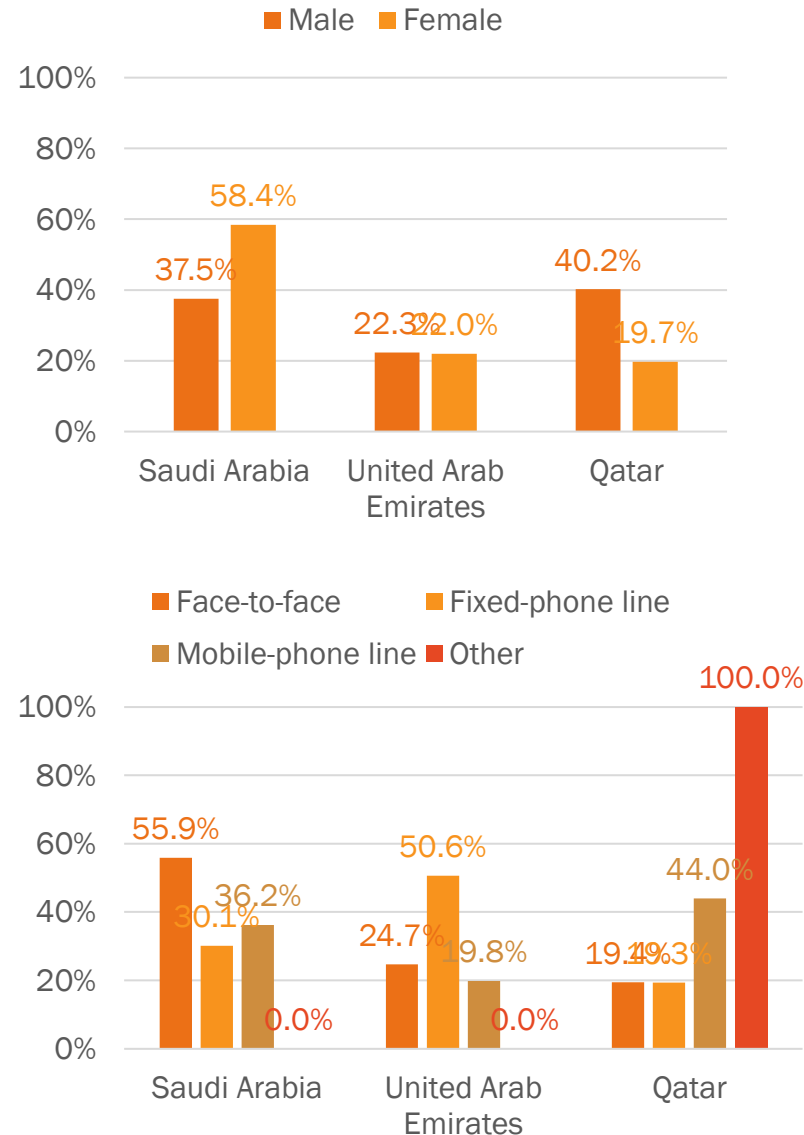
Survey took place between 7th January to 31st August 2016

GCC	No. of surveyed respondents
Saudi Arabia	4,053
United Arab Emirates	2,012
Qatar	3,010
Total	9,075

National representative samples






























Source: GEM, author analysis



Country Effect (between)

- 13 entrepreneurial indicators were found to have a statistically significant percentage equality with country, while for social entrepreneurship which found to have no statistically significant percentage equality at 5% significance level, based on Chi square test findings
- GCC countries (Qatar, Saudi Arabia and UAE) had unequal percentages (country effect or between countries effect and differences found)
- Therefore, the outlook between countries in terms of the 13 entrepreneurial indicators distinguishes higher percentage in a specific one country compared to the other two countries
- GCC countries are mostly (13 out 14 indicators) heterogenous in the entrepreneurship indicators outlook






























Country Effect (between)

GEM Entrepreneurial Indicator	Dominating GCC country
Fear of failure	 45.3% (highest), while  26.7% (lowest)
Career choice	 48.1% (highest), while  22.3% (lowest)
Ease of startup	 54.2% (highest), while  20.8% (lowest)
Social entrepreneurship	Not statistically significant = percentage equality
Innovation	 36.4% (highest), while  30.5% (lowest)
Competition	 59.3% (highest), while  12.7% (lowest)
Technological innovation	 41.0% (highest), while  19.1% (lowest)
Internationalization	 53.7% (highest), while  4.9% (lowest)
Improvement-Driven Opportunity (IDO) Motives: greater independence	 60.0% (highest), while   20.0% (lowest)
Individual involvement in entrepreneurial activity	 46.3% (highest), while  25.0% (lowest)
Individuals identified as involved in the entrepreneurial process: own all	 53.8% (highest), while  22.3% (lowest)
Reasons for exiting business (if exited): an opportunity to sell the business-positive	 67.7% (highest), while  14.6% (highest)
Individual involvement in entrepreneurial activity (provided funds)	 58.6% (highest), while  13.7% (lowest)
Relationship with entrepreneur who received funds: a stranger with a good business idea	 63.6% (highest), while  9.1% (lowest)



























Gender Effect (within)

- All 14 entrepreneurial indicators had a statistically significant percentage equality when controlling for only male respondents, based on Chi square test findings
- 12 entrepreneurial indicators had a statistically significant percentage equality when controlling for only female respondents, while Improvement-Driven Opportunity (IDO) Motives and Individual involvement in entrepreneurial activity had no statistically significant percentage equality at 5% significance level, based on Chi square test findings

Gender Effect (within)-male

GEM Entrepreneurial Indicator	Male only in the GCC countries	
Fear of failure	 35.2% (highest), while  32.3% (lowest)	
Career choice	 40.6% (highest), while  23.0% (lowest)	
Ease of startup	 46.4% (highest), while  26.6% (lowest)	
Social entrepreneurship	 40.1% (highest), while  26.8% (lowest)	
Innovation	 38.6% (highest), while  23.7% (lowest)	
Competition	 54.3% (highest), while  12.3% (lowest)	
Technological innovation	 50.8% (highest), while  16.4% (lowest)	
Internationalization	 51.6% (highest), while  0.0% (lowest)	
Improvement-Driven Opportunity (IDO) Motives: greater independence	 52.0% (highest), while  22.3% (lowest)	
Individual involvement in entrepreneurial activity	 51.2% (highest), while  22.6% (lowest)	
Individuals identified as involved in the entrepreneurial process: own all	 45.1% (highest), while  26.8% (lowest)	
Reasons for exiting business (if exited): an opportunity to sell the business-positive	 46.3% (highest), while  19.5% (highest)	
Individual involvement in entrepreneurial activity (provided funds)	 54.1% (highest), while  13.3% (lowest)	
Relationship with entrepreneur who received funds: a stranger with a good business idea	  42.9% (highest), while  14.3% (lowest)	

Gender Effect (within)-female

GEM Entrepreneurial Indicator	Female only in the GCC countries
Fear of failure	 64.3% (highest), while  14.5% (lowest)
Career choice	 62.1% (highest), while  17.0% (lowest)
Ease of startup	 69.3% (highest), while  8.8% (lowest)
Social entrepreneurship	 59.0% (highest), while  18.0% (lowest)
Innovation	 60.0% (highest), while  10.0% (lowest)
Competition	 71.3% (highest), while  13.8% (lowest)
Technological innovation	 55.4% (highest), while  19.6% (lowest)
Internationalization	 60.0% (highest), while   20.0% (lowest)
Improvement-Driven Opportunity (IDO) Motives	Not statistically significant = percentage equality
Individual involvement in entrepreneurial activity	Not statistically significant = percentage equality
Individuals identified as involved in the entrepreneurial process: own all	 83.3% (highest), while  7.1% (lowest)
Reasons for exiting business (if exited): an opportunity to sell the business-positive	 83.6% (highest), while  0.0% (lowest)
Individual involvement in entrepreneurial activity (provided funds)	 70.2% (highest), while  14.7% (lowest)
Relationship with entrepreneur who received funds: a stranger with a good business idea	 100.0% (highest), while   0.0% (lowest)

Conclusions

- Despite several similarities and default homogeneity in GCC, bivariate analysis found proportion inequalities and differences in all entrepreneurial indicators due to country (heterogeneity between countries). This cross-country differences indicates variation of entrepreneurship policies in place and focus of public officials as well as variability among entrepreneurship environments (ecosystem) of each country.
- GCC countries varied significantly in all entrepreneurial indicators except one which is: social entrepreneurship.
- Saudi Arabia is associated with: relationship with a stranger with a good business idea; exiting positively by an opportunity to sell the business; greater independence motivation; high competition; active with providing funds; ease of startup perception; owning all business
- Qatar is associated with: individual involvement in the entrepreneurial activity; technological innovation
- UAE is associated with: internationalization
- Controlling for gender (within effect), GCC countries were found to have percentage equality (same levels) in only two entrepreneurship variables for female only, they are: while Improvement-Driven Opportunity (IDO) Motives and Individual involvement in entrepreneurial activity
- Controlling for gender (within effect), GCC countries were found to have percentage inequality in all variables when controlling for male, and for most of the variables when controlling for female
- Qatari male are associated with: fear of failure perception; technological innovation; individual involvement of entrepreneurial activity; relationship with a stranger with a good business idea. Qatari female were found not associated with any indicator
- UAE male are associated with: internationalization. UAE female are associated with: internationalization; innovation
- Saudi Arabia male are associated with: competition; active with providing funds; relationship with a stranger with a good business idea. Saudi Arabia female are associated with: relationship with a stranger with a good business idea; exiting positively by an opportunity to sell the business; owning all business; competition; active with providing funds.

Theoretical and Policy Implications

- Entrepreneurs to be informed of the entrepreneurship outlook in GCC
- Policy makers in GCC to be informed of the statistically significant differences between GCC countries and within gender due to the differences in the ecosystems and the policies adopted with a view to support entrepreneurs continue and/or grow further and reduce the negative exit reasons (discontinuity)
- Only Bahrain in the GCC who did not conduct GEM. Bahrain to conduct GEM survey, to allow describing the entrepreneurship outlook and uncover entrepreneurial indicators that allows comparing with other countries
- To study and capture the entrepreneurship outlook for Kuwait and Oman as soon as their GEM is kept available
- To investigate the outlook of gender controlling for GCC country
- COVID19 outlook may differ. This is worth investigating when a recent GEM data set is released

Thanks. Q & A time now.



Jalal Naser

Principal Consultant

jalal@jafcon.com

www.jafcon.com

<https://bh.linkedin.com/in/jalalmnasser>

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For productivity improvement