The background of the image is a photograph of a large Olympic rings sculpture made of white stone or concrete, situated on a grassy hill. The rings are partially illuminated by the warm, orange and yellow hues of a setting sun over a body of water. In the distance, a coastal town with numerous houses and buildings is visible along the shore. The sky is a dramatic gradient from deep blue to fiery orange and red.

MODERN SUMMER

OLYMPICS

1956-2016

COSC3000 - VISUALISATION

TEAM - LOUISE CUNNINGHAM

42637460

DATA SOURCES

A photograph of several female athletes standing on a red running track with white lane markings. They are wearing athletic gear and race bibs. The background shows the curved edge of the track and some stadium seating.

1

ATHLETES

ID	Name	Sex	Age	Height	Weight	Team	NOC	Games	Year	Season	City	Sport	Event	Medal
1	A Dijiang	M	24	180	80	China	CHN	1992 Summer	1992	Summer	Barcelona	Basketball	Basketball	NA
2	A Lamusi	M	23	170	60	China	CHN	2012 Summer	2012	Summer	London	Judo	Judo Men	NA
3	Gunnar Nielsen	M	24	NA	NA	Denmark	DEN	1920 Summer	1920	Summer	Antwerpen	Football	Football Men	NA
4	Edgar Lindström	M	34	NA	NA	Denmark	DEN	1900 Summer	1900	Summer	Paris	Tug-Of-War	Tug-Of-War	Gold
5	Christine F	F	21	185	82	Netherlands	NED	1988 Winter	1988	Winter	Calgary	Speed Skating	Speed Skating	NA
5	Christine F	F	21	185	82	Netherlands	NED	1988 Winter	1988	Winter	Calgary	Speed Skating	Speed Skating	NA
5	Christine F	F	25	185	82	Netherlands	NED	1992 Winter	1992	Winter	Albertville	Speed Skating	Speed Skating	NA
5	Christine F	F	25	185	82	Netherlands	NED	1992 Winter	1992	Winter	Albertville	Speed Skating	Speed Skating	NA

2

NOC REGIONS

NOC	region	notes
AFG	Afghanistan	
AHO	Curacao	Netherlands Antilles
ALB	Albania	
ALG	Algeria	

4

POPULATION

Country Name	Country Code	Indicator Name	Indicator Code	1960	1961	1962	1963	1964	1965
Aruba	ABW	Population, total	SP.POP.TOTL	54211	55438	56225	56695	57032	57360
Afghanistan	AFG	Population, total	SP.POP.TOTL	8996973	9169410	9351441	9543205	9744781	9956320
Angola	AGO	Population, total	SP.POP.TOTL	5454933	5531472	5608539	5679458	5735044	5770570
Albania	ALB	Population, total	SP.POP.TOTL	1608800	1659800	1711319	1762621	1814135	1864791
Andorra	AND	Population, total	SP.POP.TOTL	13411	14375	15370	16412	17469	18549
Arab World	ARB	Population, total	SP.POP.TOTL	92197753	94724510	97334442	100034179	102832760	105736431
United Arab Emirates	ARE	Population, total	SP.POP.TOTL	92418	100796	112118	125130	138039	149857

3

HOSTING

Year	City	Host_Country	Season	Host_NOC
2004	Athens	Greece	Summer	GRE
2006	Turin	Italy	Winter	ITA
2008	Beijing	China	Summer	CHN
2010	Vancouver	Canada	Winter	CAN
2012	London	England	Summer	GBR
2014	Sochi	Russia	Winter	RUS
2016	Rio de Janeiro	Brazil	Summer	BRA

5

GDP

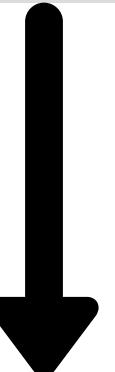
Country Name	Country Code	Indicator Name	Indicator Code	2002	2003	2004	2005
Aruba	ABW	GDP (current US\$)	NY.GDP.MKTP.CD	1.94E+09	2.02E+09	2.23E+09	2.33E+09
Afghanistan	AFG	GDP (current US\$)	NY.GDP.MKTP.CD	4.06E+09	4.52E+09	5.23E+09	6.21E+09
Angola	AGO	GDP (current US\$)	NY.GDP.MKTP.CD	1.53E+10	1.78E+10	2.36E+10	3.7E+10
Albania	ALB	GDP (current US\$)	NY.GDP.MKTP.CD	4.35E+09	5.61E+09	7.18E+09	8.05E+09
Andorra	AND	GDP (current US\$)	NY.GDP.MKTP.CD	1.73E+09	2.4E+09	2.94E+09	3.26E+09
Arab World	ARB	GDP (current US\$)	NY.GDP.MKTP.CD	7.79E+11	8.73E+11	9.64E+11	1.19E+12

DATA PROCESSING



COMBINED DATASET

Games	Host_NOC	Season	Year	Entries	Athletes	Event	Sport	Medal	NOC	Male	Female	Num_BMI	Perc_BMI
		winter	1952	1068	694	22	8	130	30	280	109	144	0.13
1952 Wint	NOR	winter	1952	1068	694	22	8	130	30	280	109	144	0.13
1952 Sum	FIN	Summer	1952	8270	4932	149	19	897	69	4411	521	1914	0.23
1956 Wint	ITA	Winter	1956	1307	821	24	8	150	32	689	132	334	0.26
1956 Sum	AUS	Summer	1956	5127	3347	151	19	893	72	2963	384	2270	0.44
1960 Sum	ITA	Summer	1960	8119	5352	150	19	911	84	4739	613	7652	0.94
1960 Wint	USA	Winter	1960	1116	665	27	8	147	30	521	144	512	0.46
1964 Sum	JPN	Summer	1964	7702	5137	163	21	1029	93	4457	680	7406	0.96



SUMMER, AFTER 1955

ID	Sex	Age	Height	Weight	NOC	Year	City	Sport	Event	Medal	Country	Host_Cou	Host_NOC	BMI	Winner	GDP	Population
110986	F	25	167	49	BRA	2016	Rio de Jan	Taekwondo	Taekwondo Women	Brazil	Brazil	BRA	17.57	FALSE	1796.28	206.16	
110802	M	26	184	93	BRA	2016	Rio de Jan	Swimming	Swimming Men's 200	Brazil	Brazil	BRA	27.47	FALSE	1796.28	206.16	
110649	F	22	166	62	BRA	2016	Rio de Jan	Fencing	Fencing Women's ep	Brazil	Brazil	BRA	22.5	FALSE	1796.28	206.16	
110649	F	22	166	62	BRA	2016	Rio de Jan	Fencing	Fencing Women's ep	Brazil	Brazil	BRA	22.5	FALSE	1796.28	206.16	
110563	M	32	160	77	BRA	2016	Rio de Jan	Weightlift	Weightlifting Men's	Brazil	Brazil	BRA	30.08	FALSE	1796.28	206.16	
110549	F	24	169	57	BRA	2016	Rio de Jan	Judo	Judo Won Gold	Brazil	Brazil	BRA	19.96	TRUE	1796.28	206.16	
1464	F	14	168	54	CHN	2016	Rio de Jan	Swimming	Swimming Women's	China	Brazil	BRA	19.13	FALSE	11137.95	1378.66	

1 GAMES TOTALS

Year	Host_NOC	Entries	Athletes	Event	Sport	Medal	NOC	Host_Medal	Visitor_Medal	Male	Female	Host_Perc	Visitor_Perc
1956	AUS	5127	3347	151	19	893	72	67	826	2963	384	7.5	92.5
1960	ITA	8119	5352	150	19	911	84	88	823	4739	613	9.66	90.34
1964	JPN	7702	5137	163	21	1029	93	62	967	4457	680	6.03	93.97
1968	MEX	8588	5558	172	20	1057	111	9	1048	4775	783	0.85	99.15
1972	GER	10304	7114	193	23	1215	120	253	962	6054	1060	20.82	79.18
1976	CAN	8641	6073	198	23	1320	91	23	1297	4813	1260	1.74	98.26

2 ATHLETES TOTALS

Year	ID	Sex	Age	BMI	NOC	Event	Medal	Winner	Medal_Perc
2016	111358	M	23	24.93	BRA	1	1	TRUE	1
2016	110986	F	25	17.57	BRA	1	0	FALSE	0
2016	110802	M	26	27.47	BRA	1	0	FALSE	0
2016	110649	F	22	22.5	BRA	2	0	FALSE	0
2016	110563	M	32	30.08	BRA	1	0	FALSE	0
2016	110549	F	24	19.96	BRA	1	1	TRUE	1

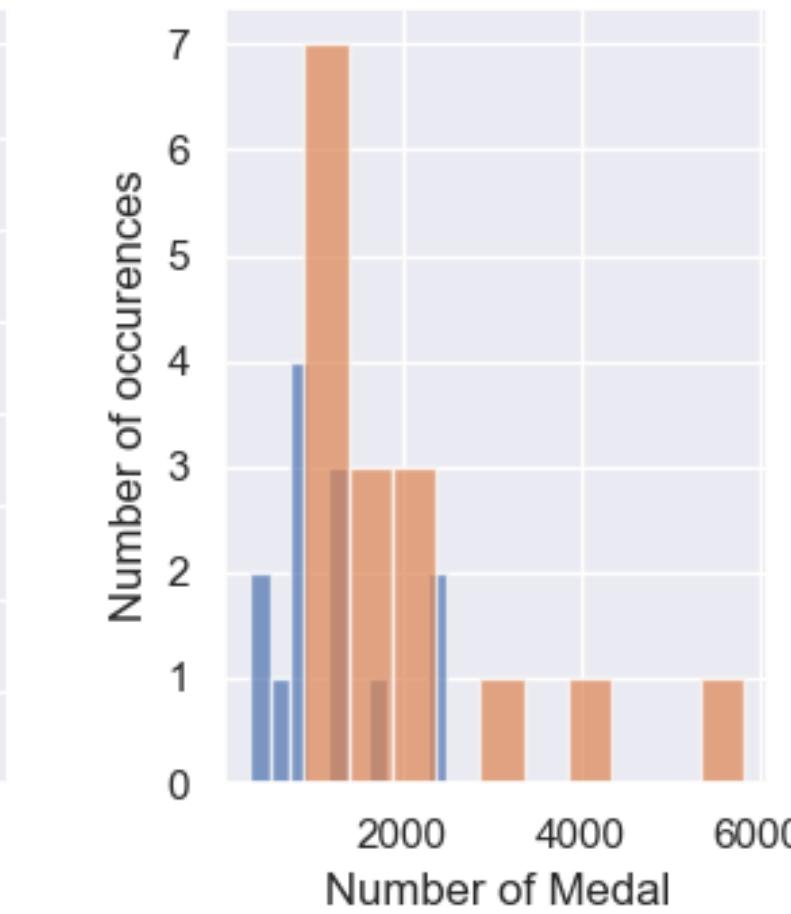
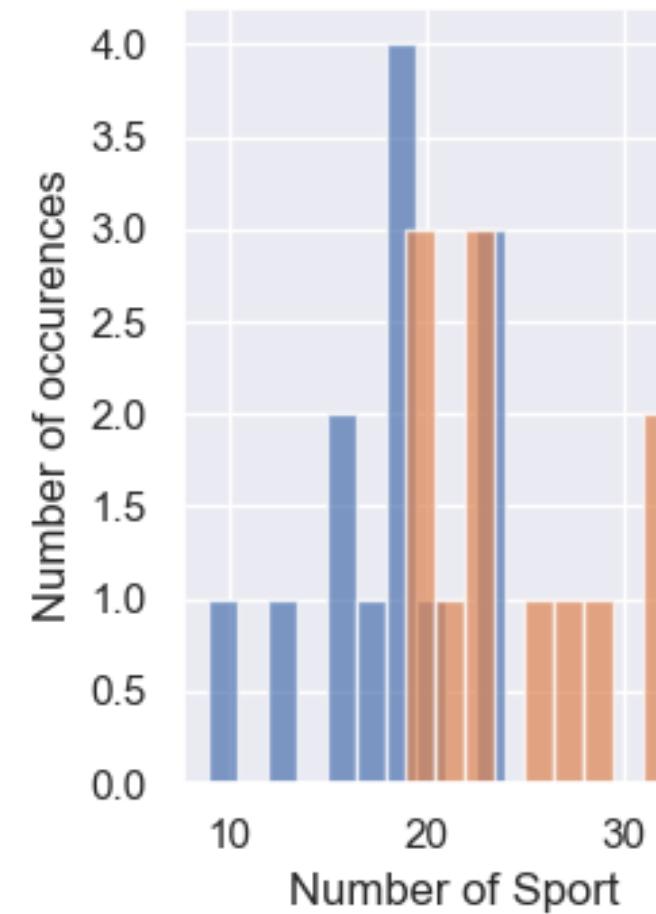
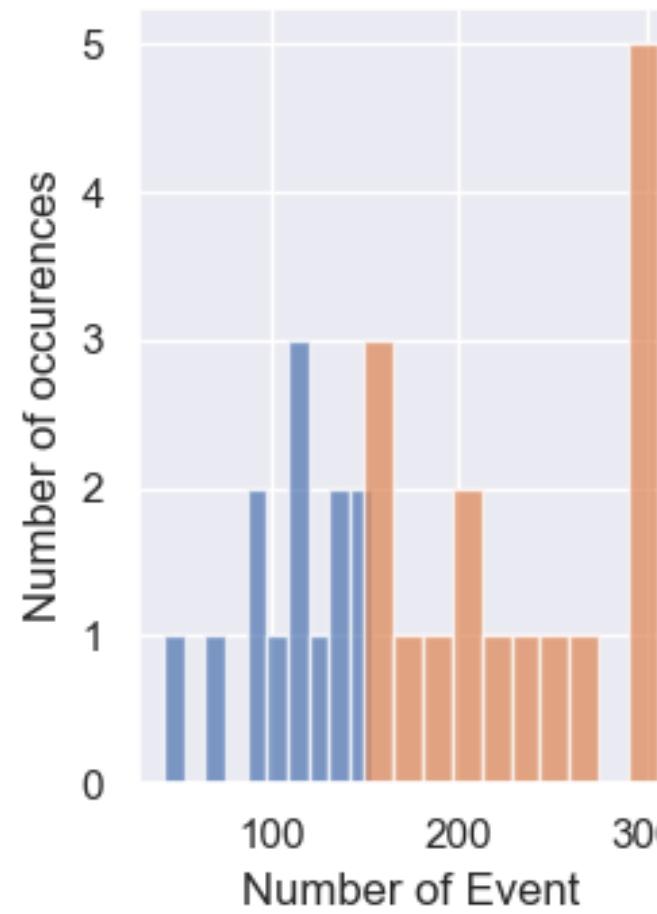
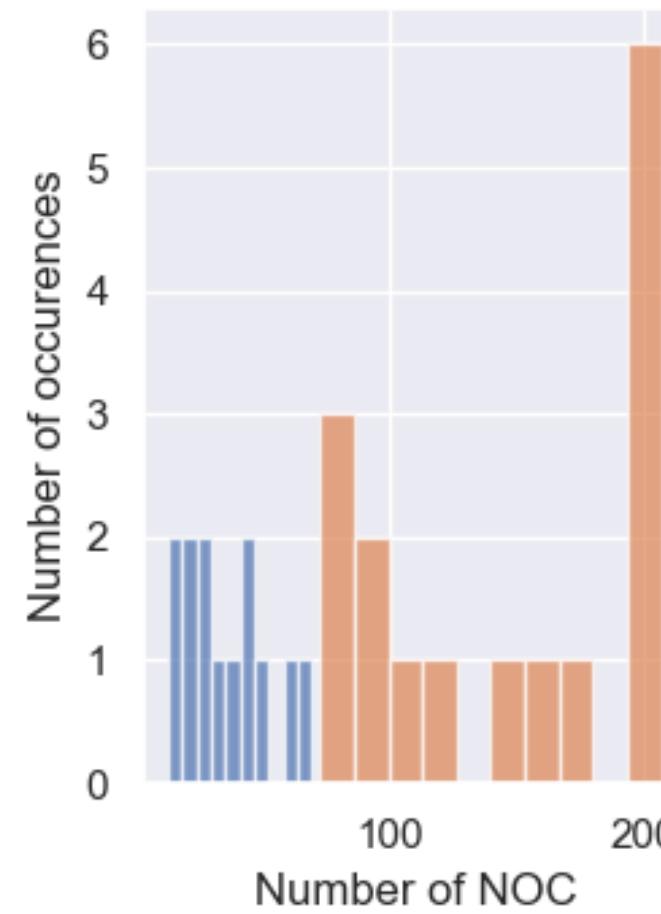
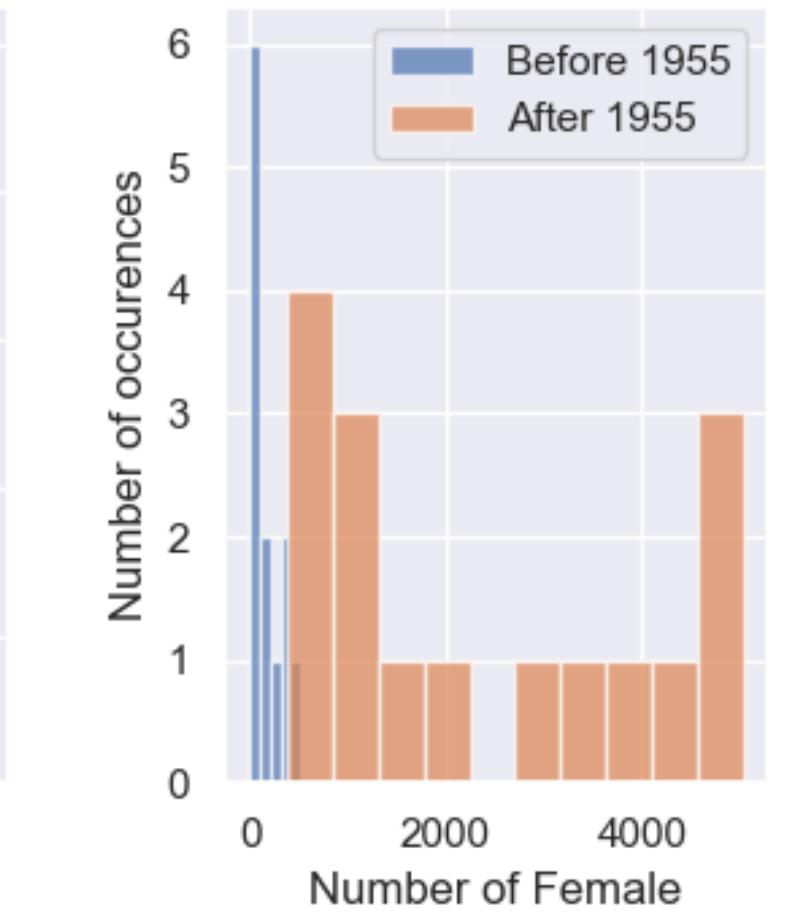
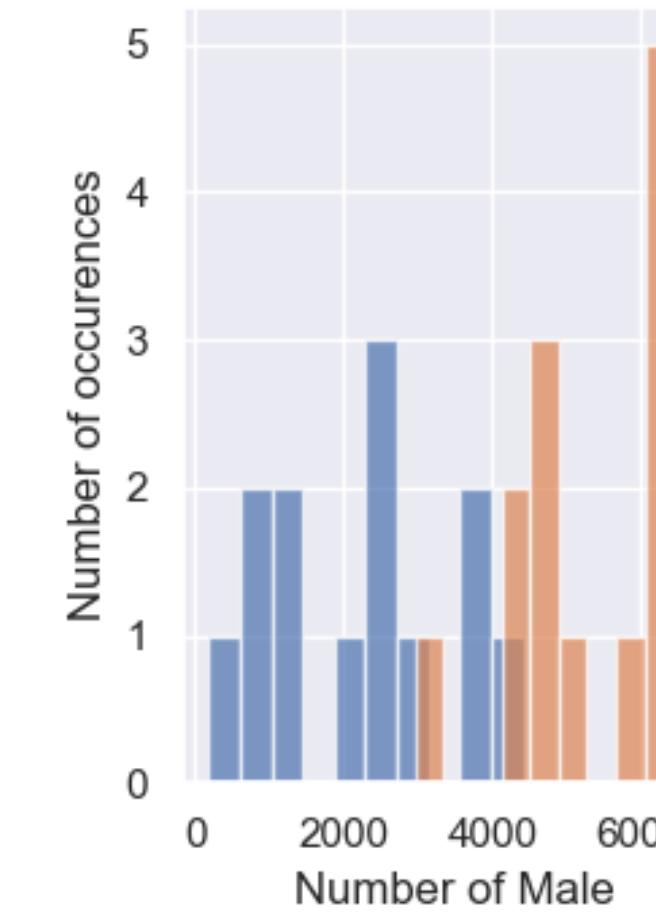
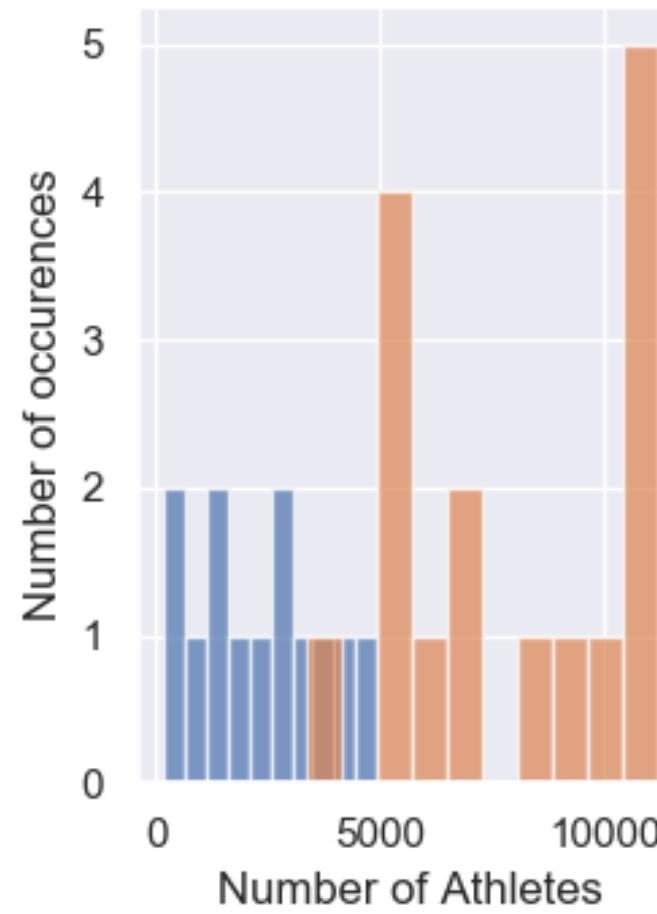
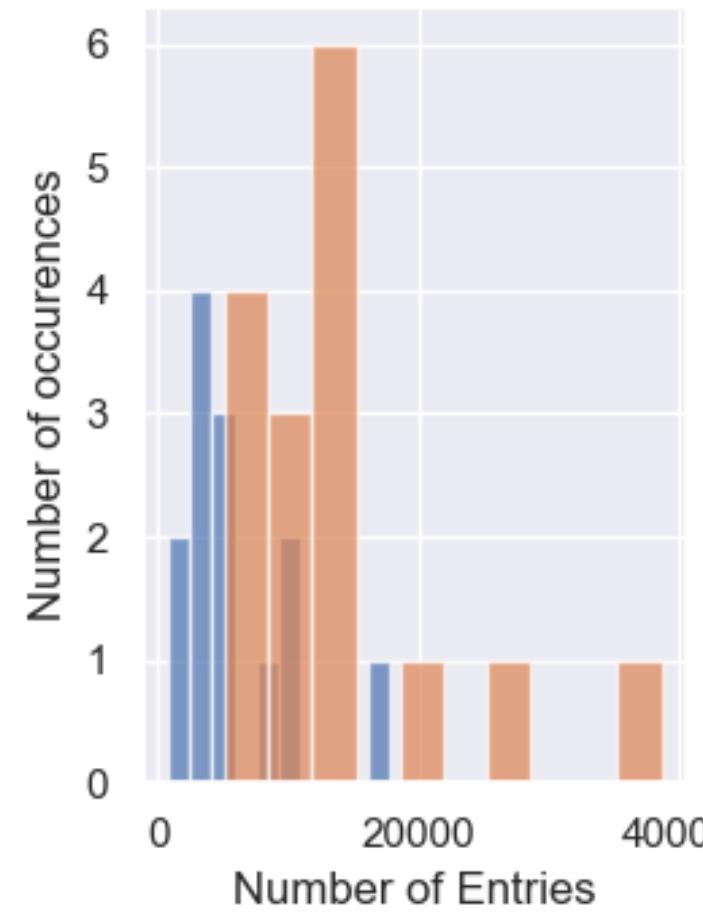
3 COUNTRIES TOTALS

Year	NOC	Country	Host_Cou	GDP	Populatio	Host	Entries	Athletes	Event	Medal	Male	Female	Games_Med	Games_Entr	Unique_Per	Medal_Per	Games_Med	Games_Entr	Top_20	Top_10
2016	HUN	Hungary	Brazil	127.51	9.81	FALSE	204	154	113	22	88	66	2023	13688	1.32	0.11	1.09	1.49	TRUE	TRUE
2016	TUR	Turkey	Brazil	863.72	79.82	FALSE	119	100	88	8	53	47	2023	13688	1.19	0.07	0.4	0.87	FALSE	FALSE
2016	CHI	Chile	Brazil	0.17	0.17	FALSE	47	42	36	0	25	17	2023	13688	1.12	0	0	0.34	FALSE	FALSE
2016	RUS	Russia	Brazil	1282.72	144.34	FALSE	406	284	181	115	142	142	2023	13688	1.43	0.28	5.68	2.97	TRUE	TRUE
2016	AZE	Azerbaijan	Brazil	37.87	9.76	FALSE	69	56	62	18	42	14	2023	13688	1.23	0.26	0.89	0.5	FALSE	FALSE
2016	SUD	Sudan	Brazil			FALSE	6	6	6	0	4	2	2023	13688	1	0	0	0.04	FALSE	FALSE
2016	ITA	Italy	Brazil	1875.58	60.63	FALSE	399	309	171	72	168	141	2023	13688	1.29	0.18	3.56	2.91	TRUE	TRUE
2016	CHA	Chad	Brazil			FALSE	2	2	2	0	1	1	2023	13688	1	0	0	0.01	FALSE	FALSE

THE GAMES



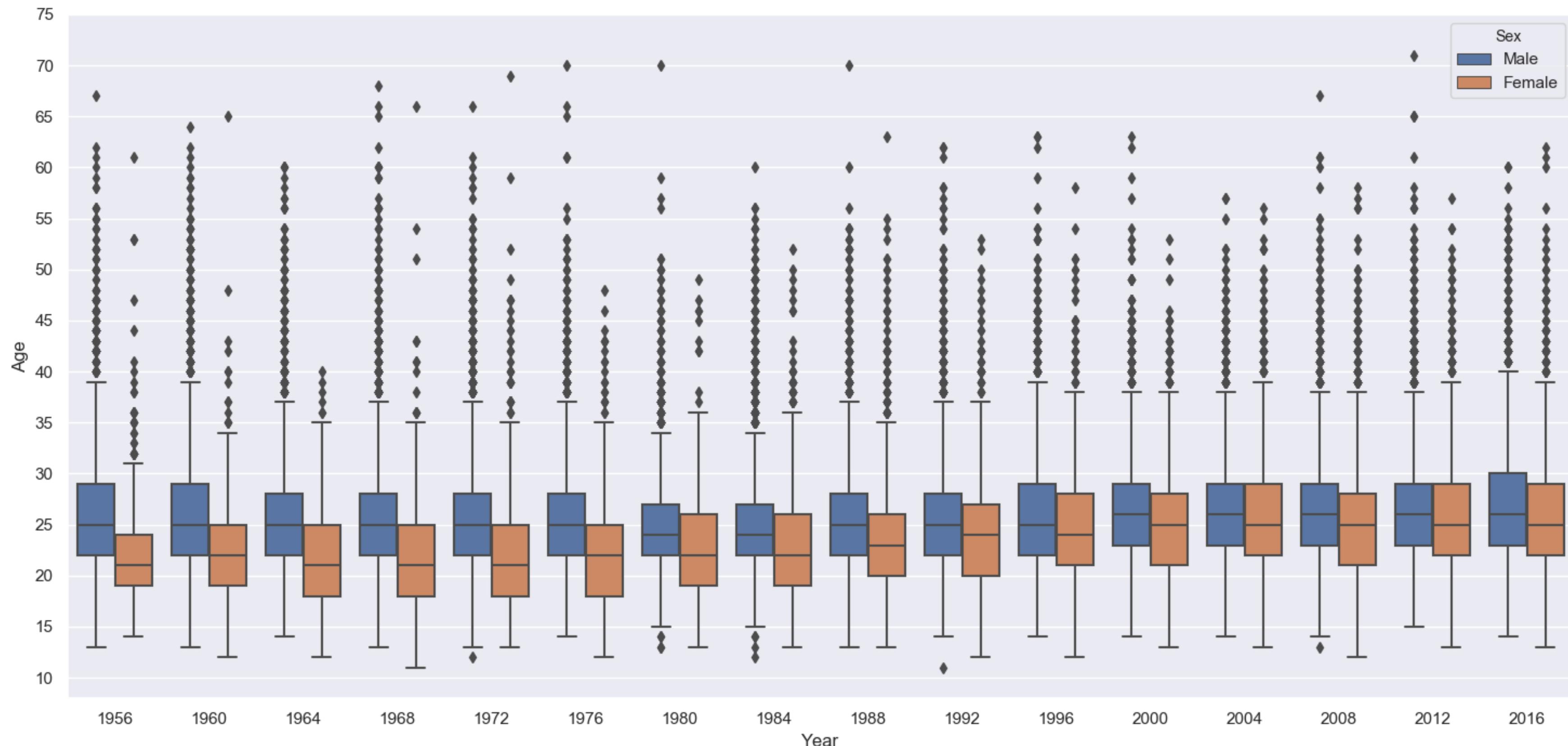
Distribution of Games Attributes for all Summer Olympics



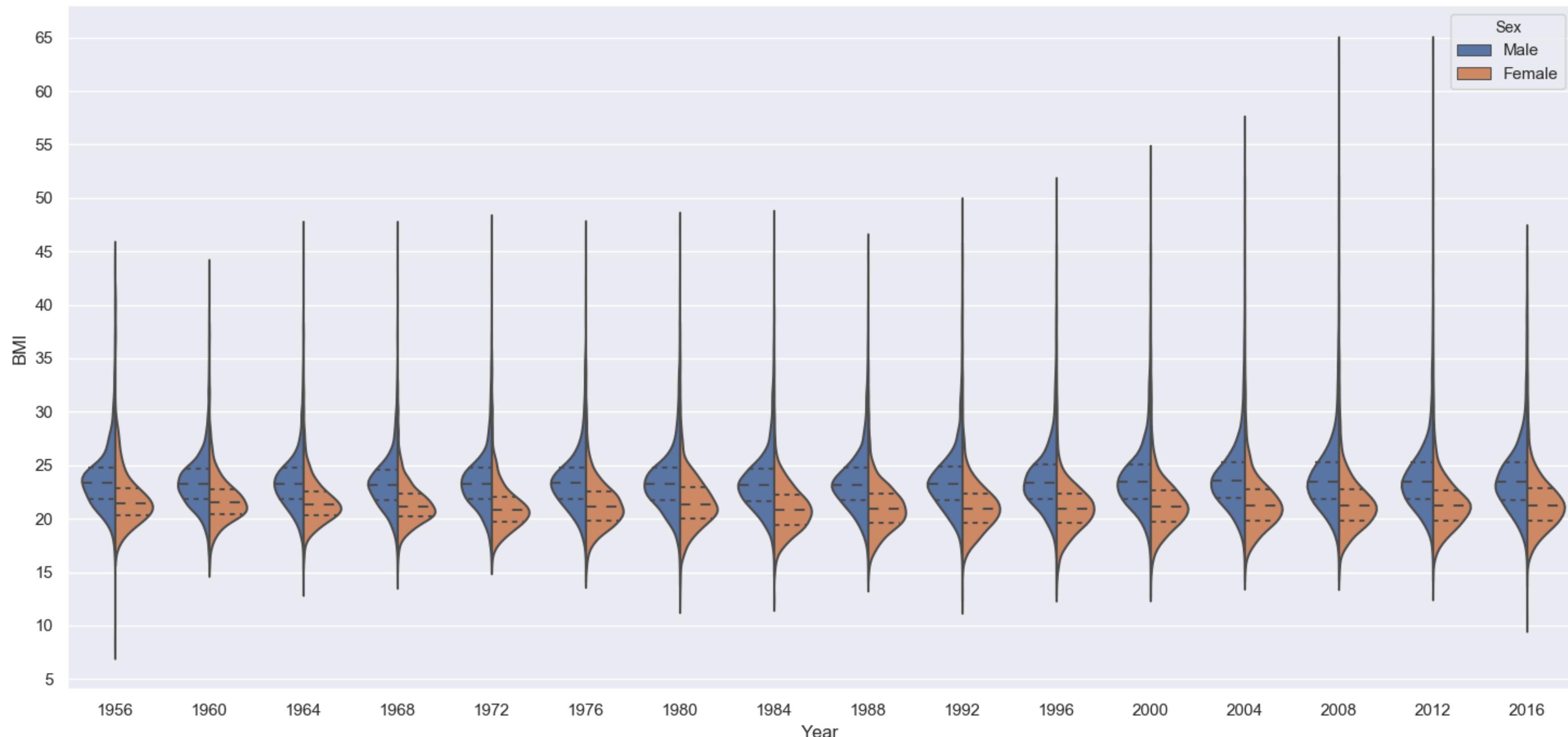


THE ATHLETES

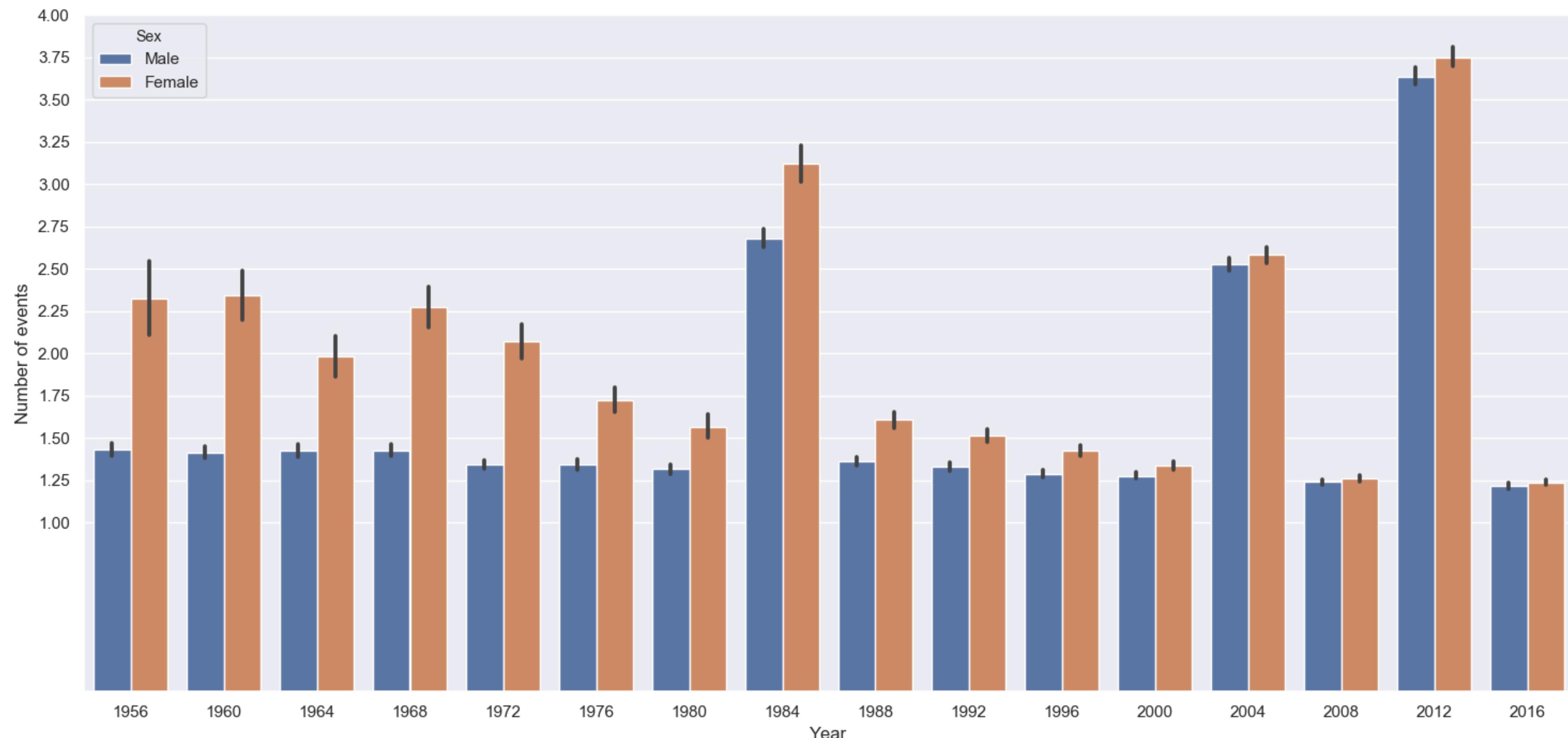
The Age of Summer Athletes since 1956 by Gender



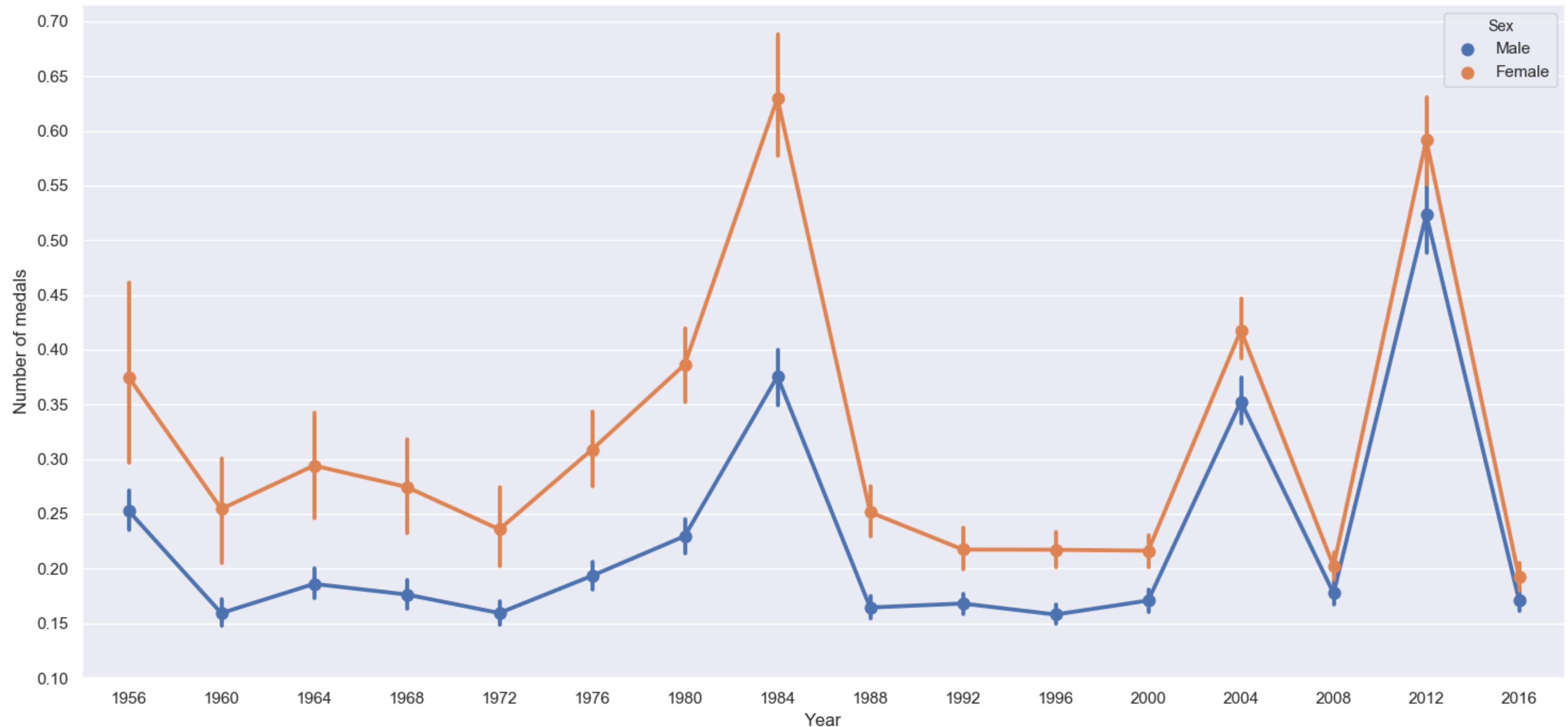
The BMI of Summer Athletes since 1956 by Gender



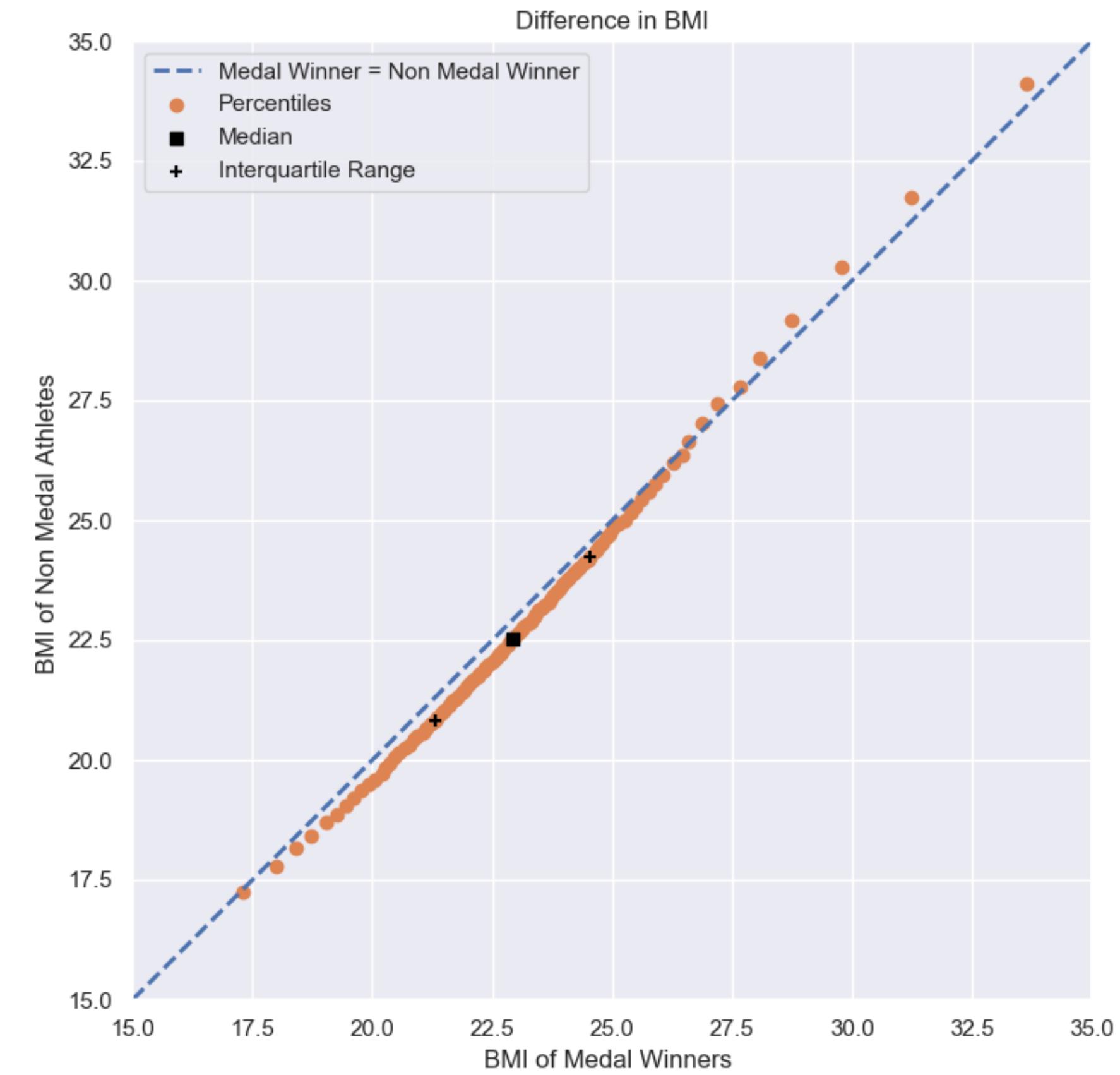
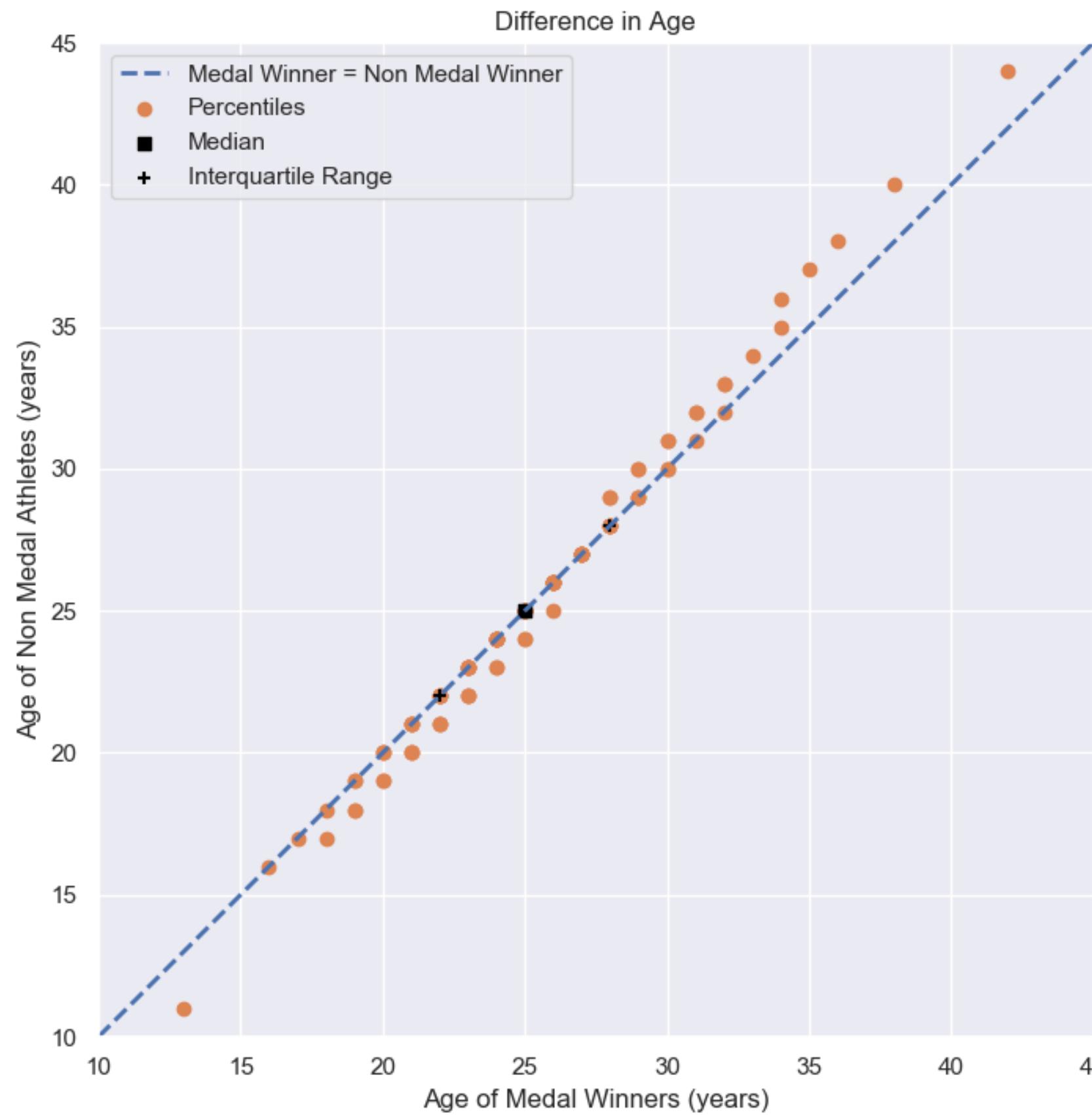
The average number of events per athlete since 1956 by gender



The average number of medals per athlete since 1956 by gender



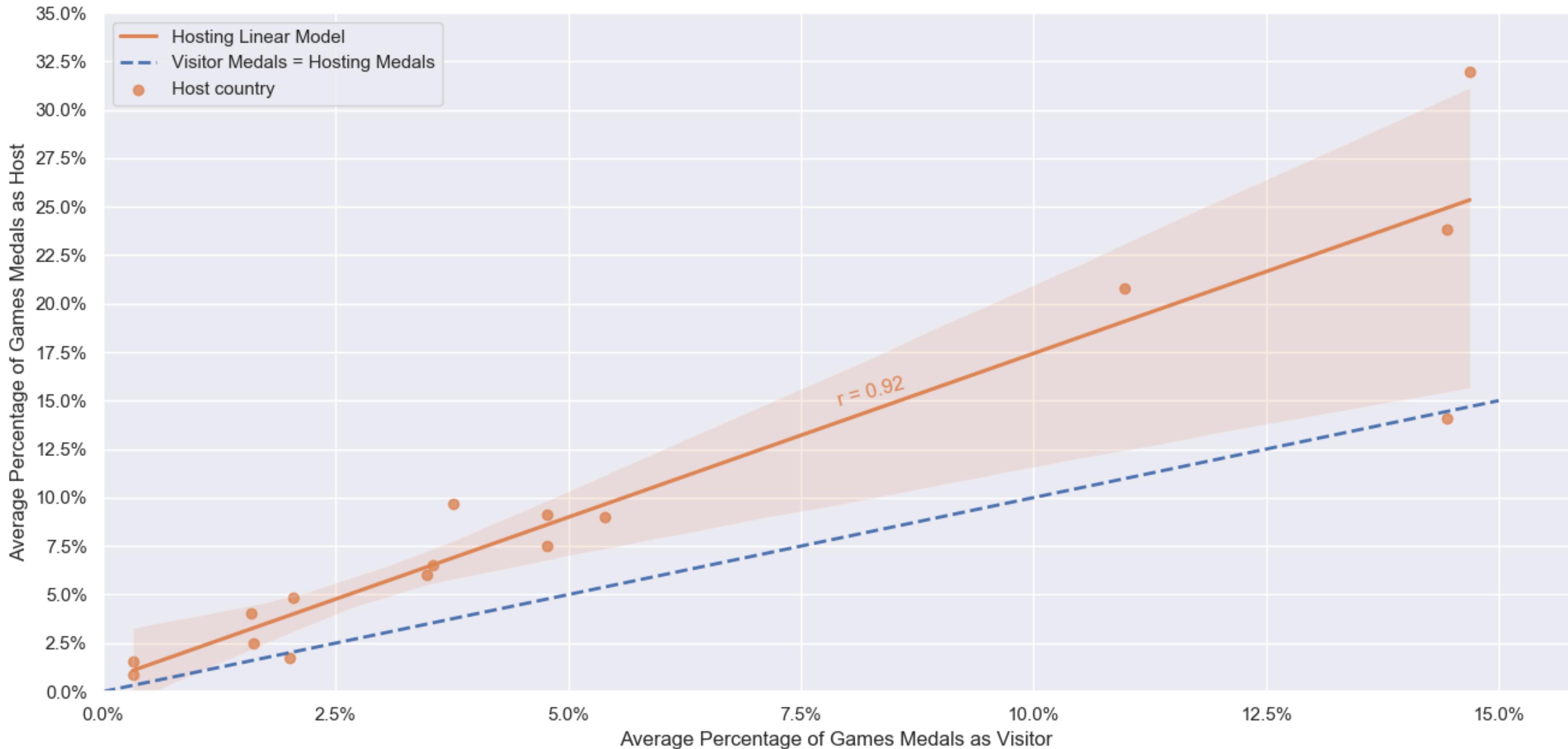
Comparison of Physical Characteristics of Medal Winners and Athletes



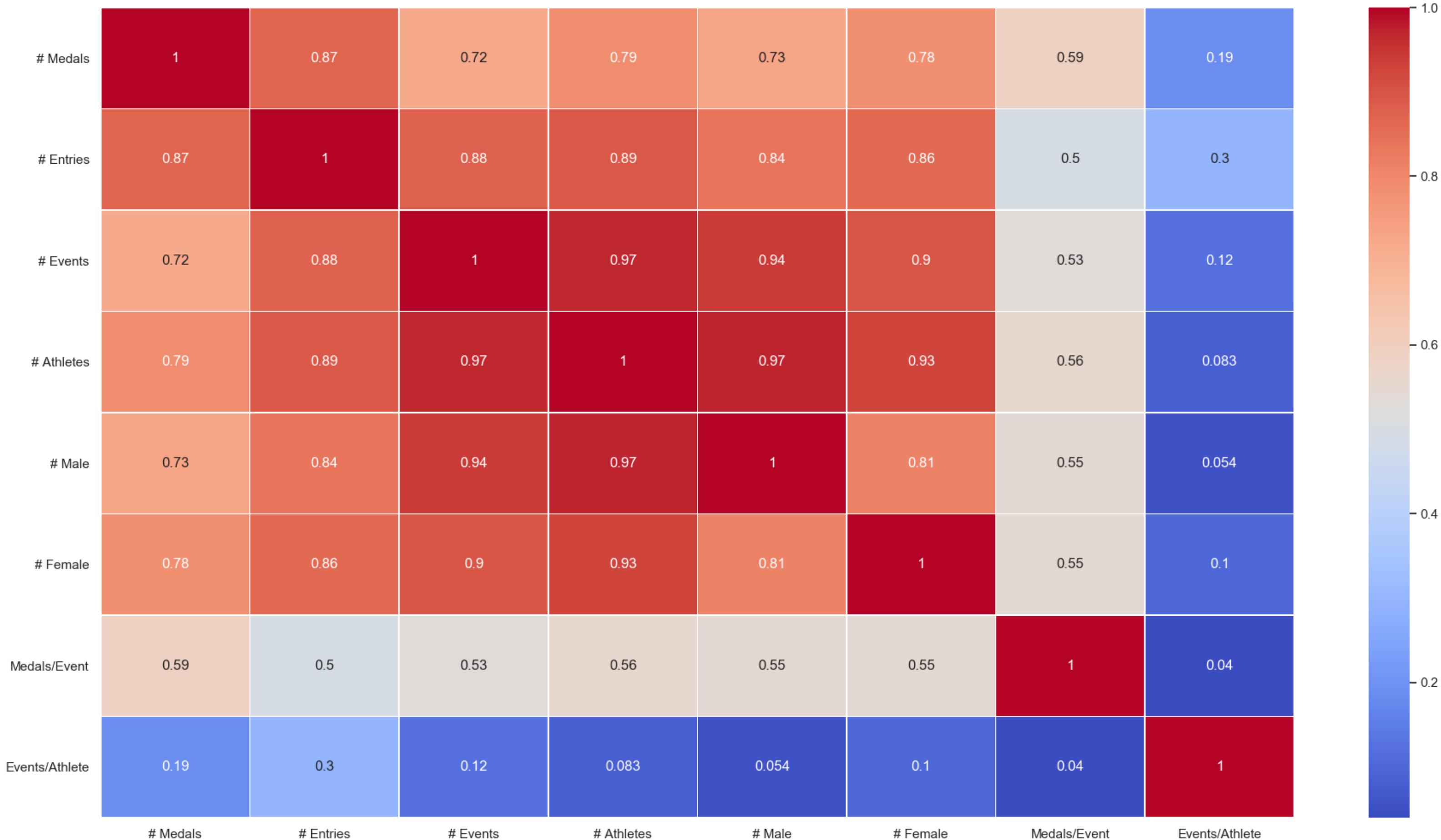
THE COUNTRIES



Comparison of the average percentage of games medals won by countries who have hosted

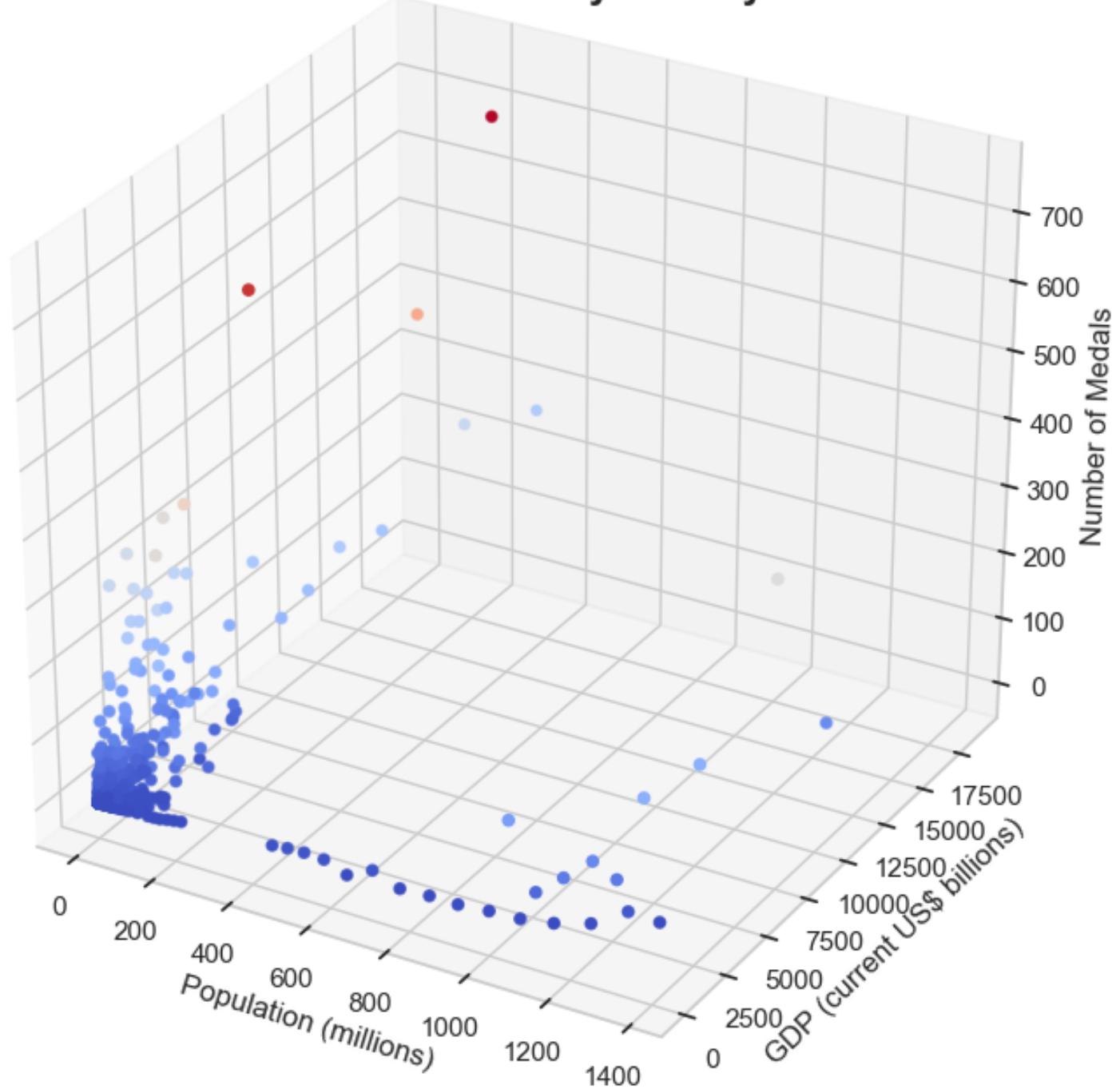


Correlation of Participation Behaviour of All Countries Competing

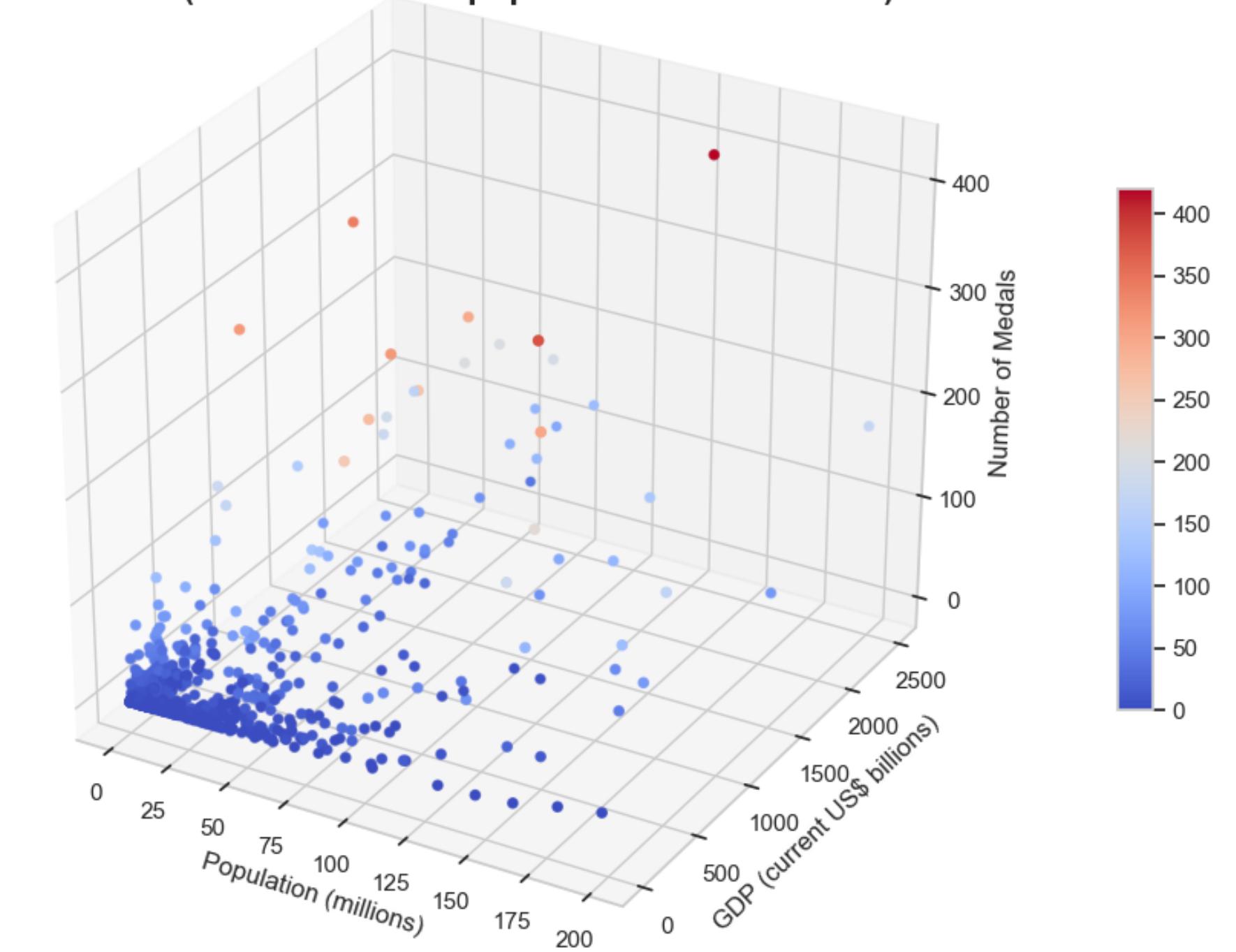


Relationship between the number of medals won by a country and its population and GDP each year

Indicators for every country



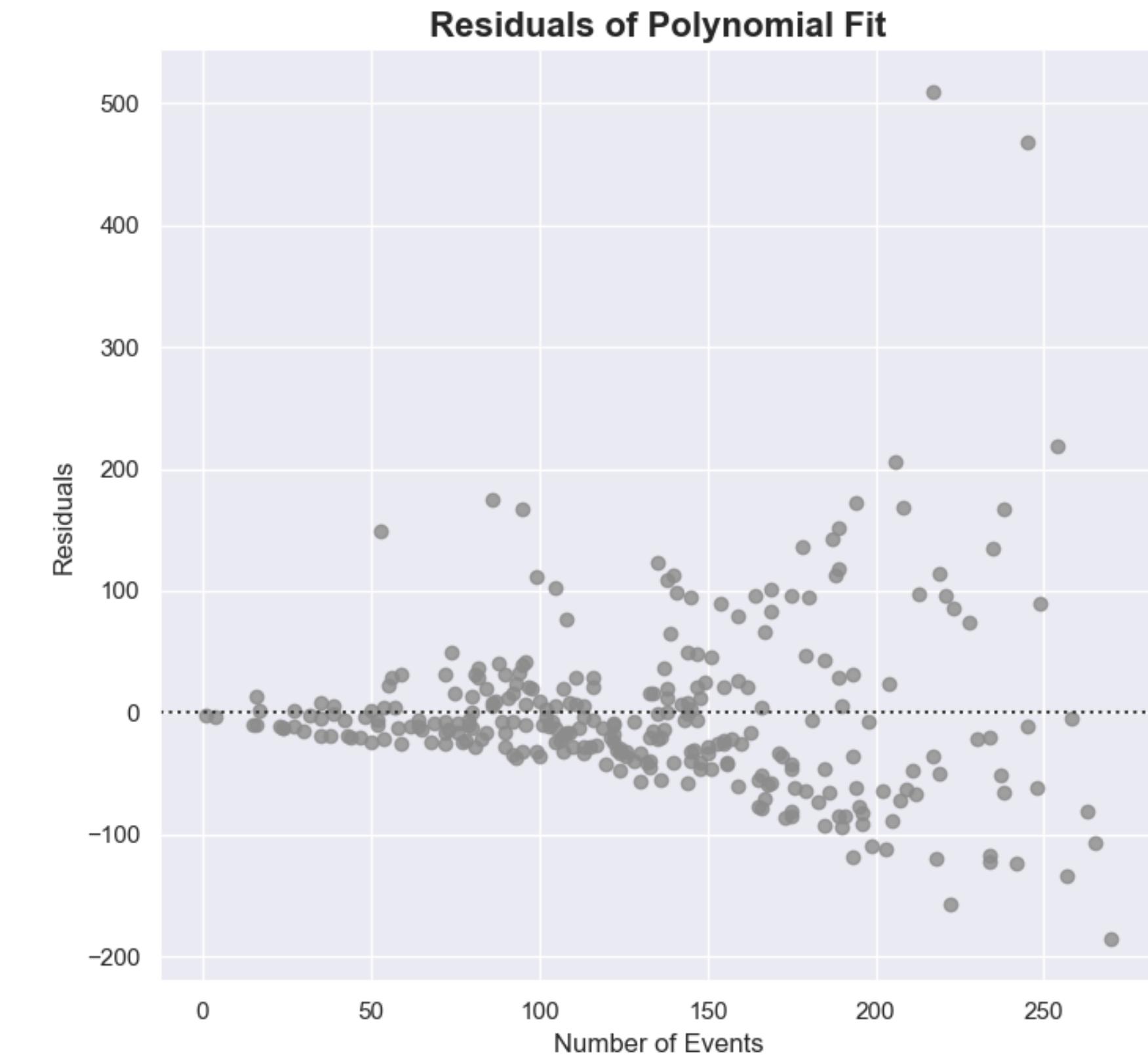
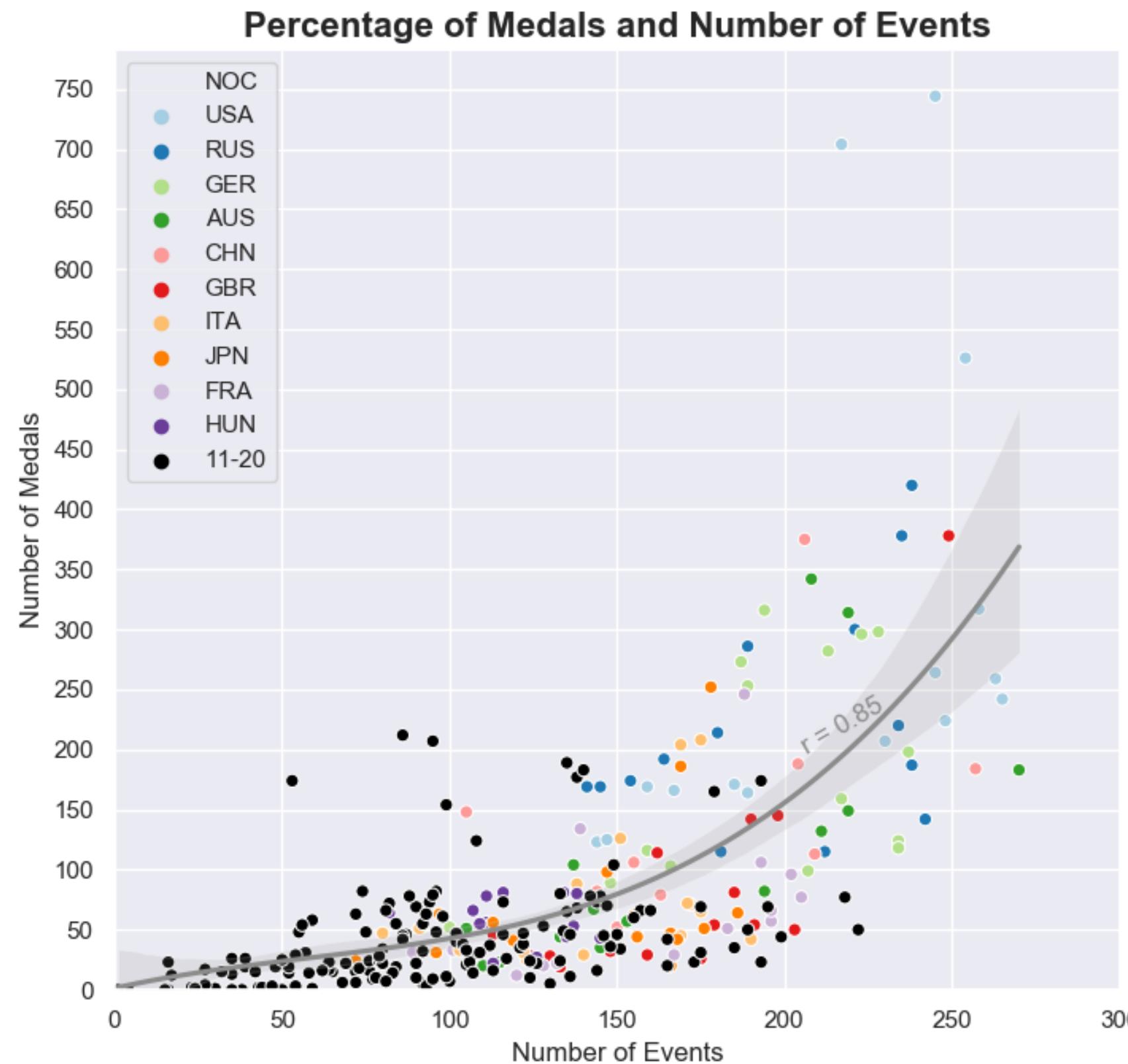
Zoom (less than 200mil population & 2500bil GDP)



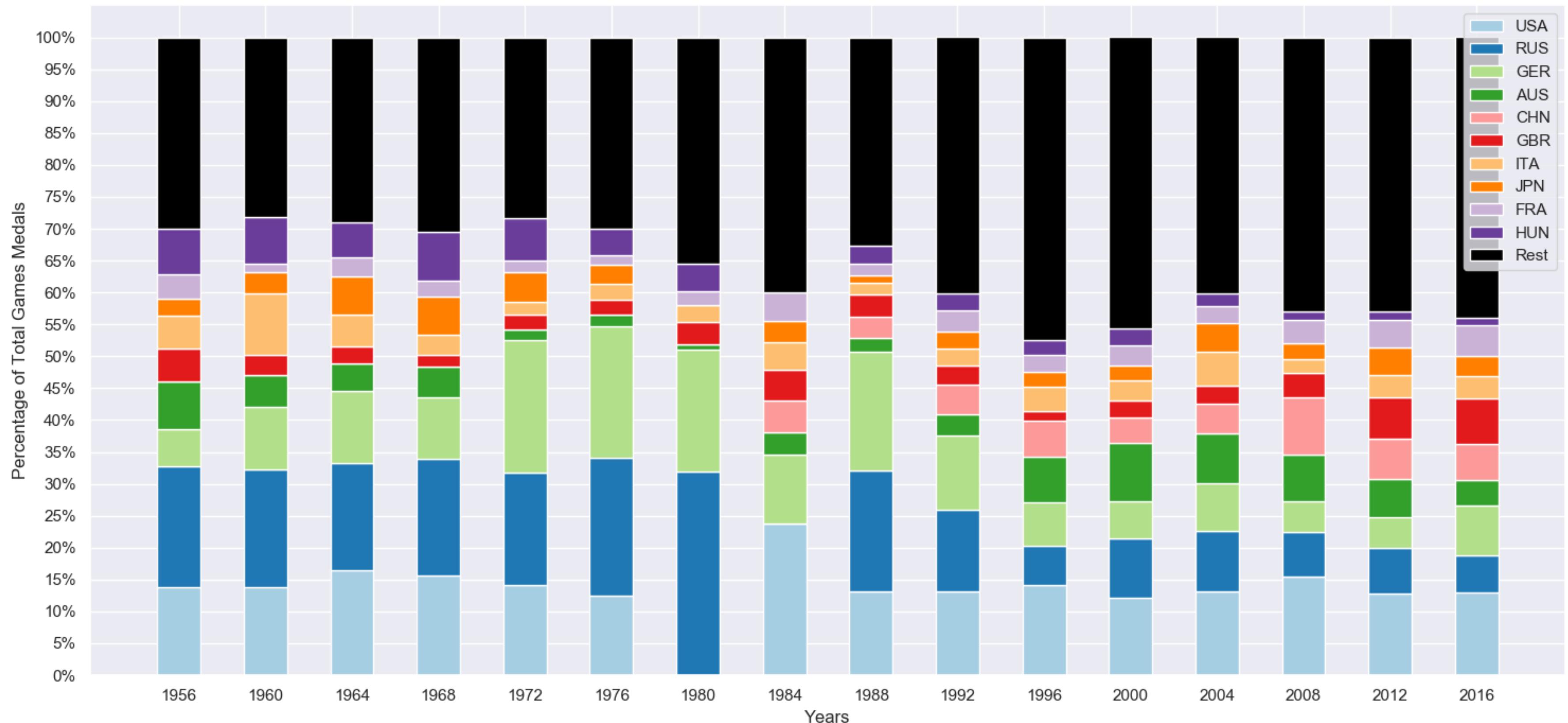
REPRESENTATION



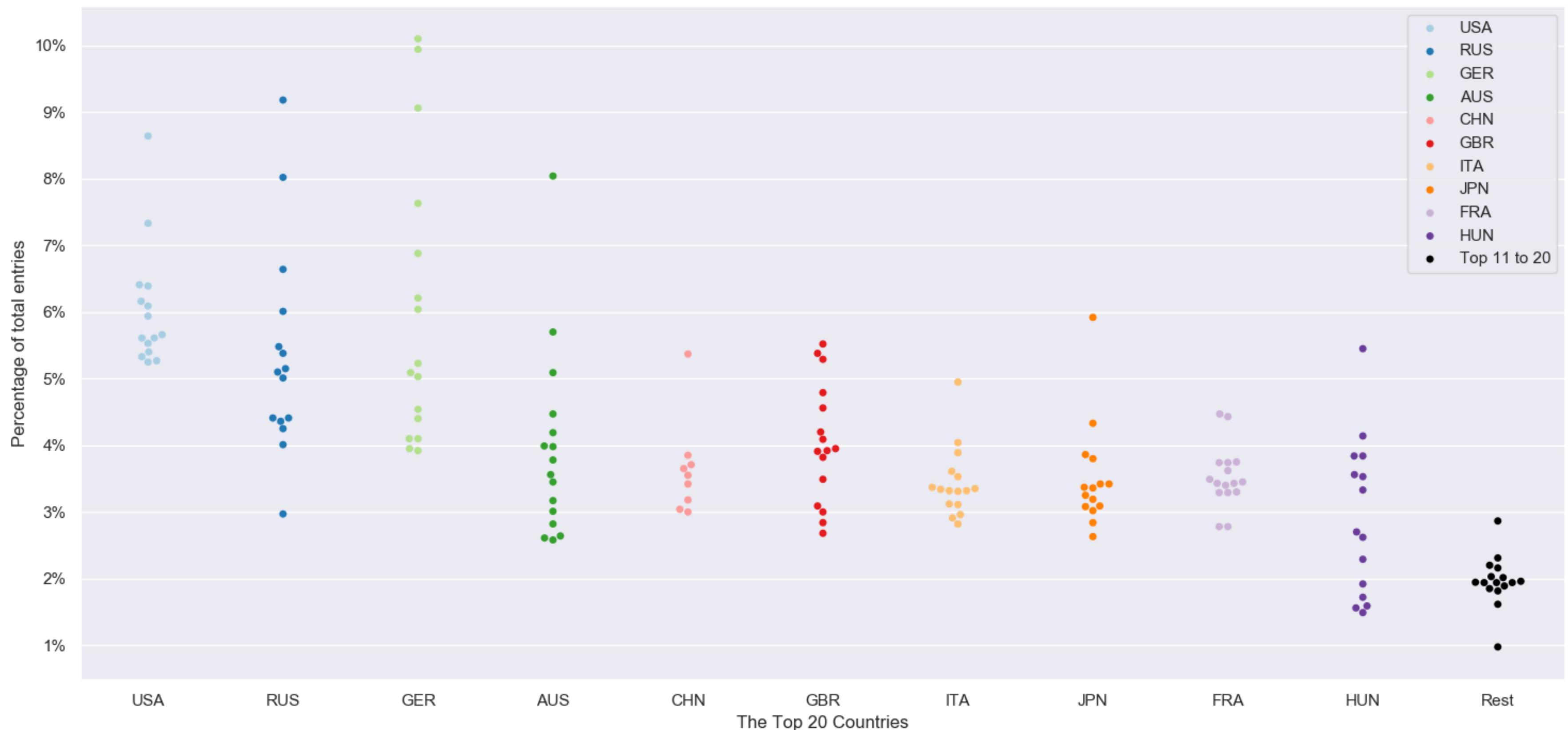
Relationship between the percentage of Total Medals and the Number of Events



The Percentage of Medals awarded to each country



The Percentage of Entries from the top 20 countries



CONCLUSION

- There has never been more opportunity
- The physical characteristics of medal winners are the same
- Diversification is better
- The number of entries positively correlates with the number of entries from a country
- GDP and population aren't barriers for most
- Medal domination by nations is weakening

REFLECTION

- Design is very important - grids, background, colour (type of palette)
- Sometimes less is better, don't overload
- Changes may need to be made
- There will always be more than can be done
- Sometimes simple is hard

Takeaways:

- Can't always trust the data
- Correlation does not imply causation
- Hypotheses don't always come true

