



RED Scientific Ltd

Agile Forces Study

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Agile Forces Study 2016



- Aim:

*“identify trends in the nature of conflict to inform
defence policy”*

- Approach: Statistical analysis of historical UK operations

- Norms
- Trends

- Identified 155 UK military deployments since 1945

- 31 Conflicts
- 46 Combat Deployments
- 78 Non-combat Deployments

- 2016 study required to update and expand the dataset and to refresh and expand the analysis undertaken in 2009-10

Database – UK Operations since 1945



Case Name	Start / End	Nature	UK Operation Type	Peak UK Scale of Effort
Rhodesia	12/1979 to 3/1980	Non-combat deployment	Peace Support - Peacekeeping	Small
Nepal- famine relief	5/1980 to 6/1980	Non-combat deployment	HADR	Niche
Vanuatu - Operation TITAN	7/1980 to 8/1980	Combat deployment	Strike - Internal Security	Small
Persian Gulf - Armilla Patrol	10/1980 to date	Combat deployment	Peace Support – Freedom of Navigation	Small
The Gambia	8/1981 to 8/1981	Non-combat deployment	Rescue Mission	Niche
Falklands – Op. CORPORATE	4/1982 to 10/1982	Conflict	Major Combat Operation	Warfighting at Scale
Lebanon - MNFL	2/1983 to 2/1984	Conflict	Peace Support – Peace Enforcement	Niche

Other data fields

- Force levels (manpower): UK, partners, enemy
- KIA: UK, partners, enemy
- Defence spending per capita: UK, enemy
- GDP per capita: crisis state pre-conflict
- Number of partners, states and NSAs

Dimensions of Conflict

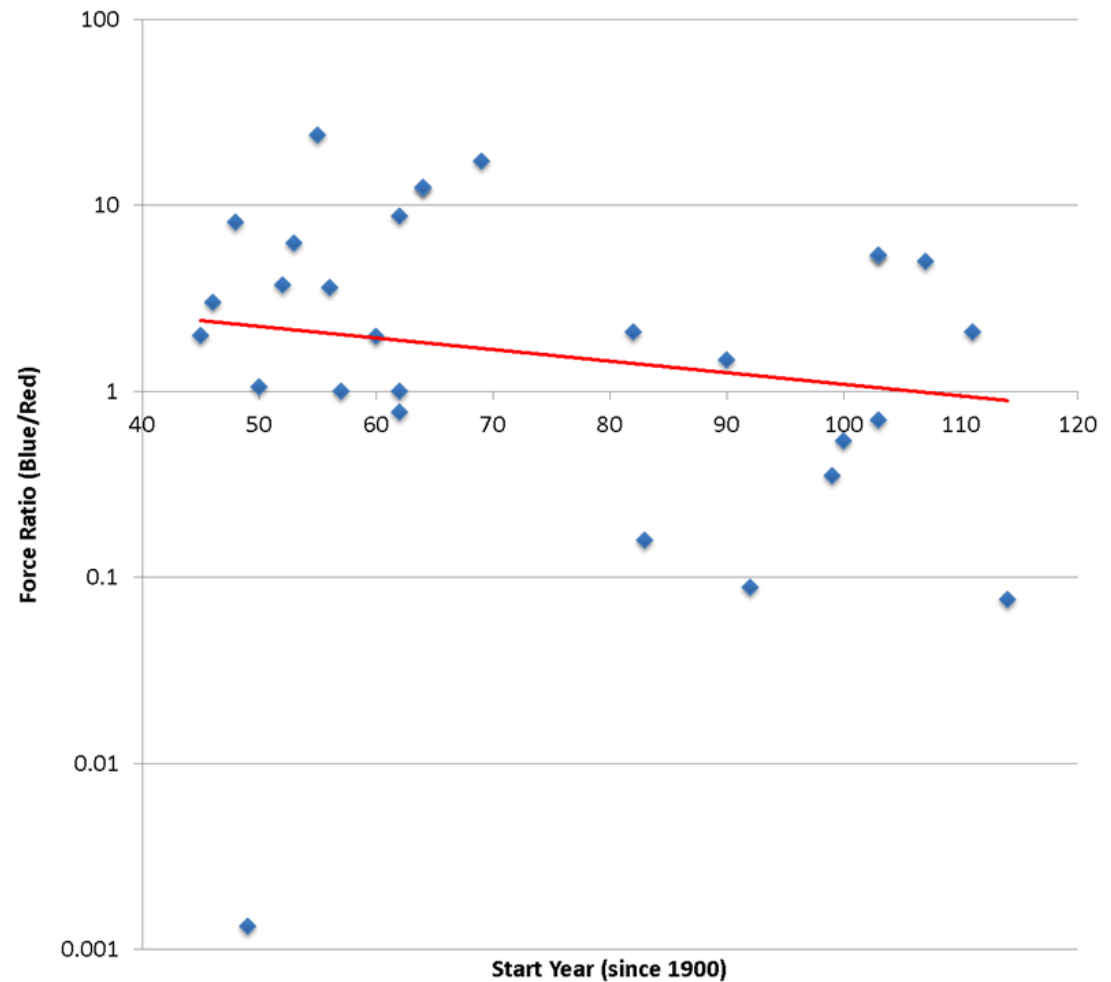


Dimension	Measure
Resource	Killed in Action (+1) per million total population
Political	Number of participant groups with distinct political control
Military	Force ratio based on manpower strengths
Social	GDP per capita of the conflict zone
Technology	Military spending per serviceperson

Analysis of Conflict Cases

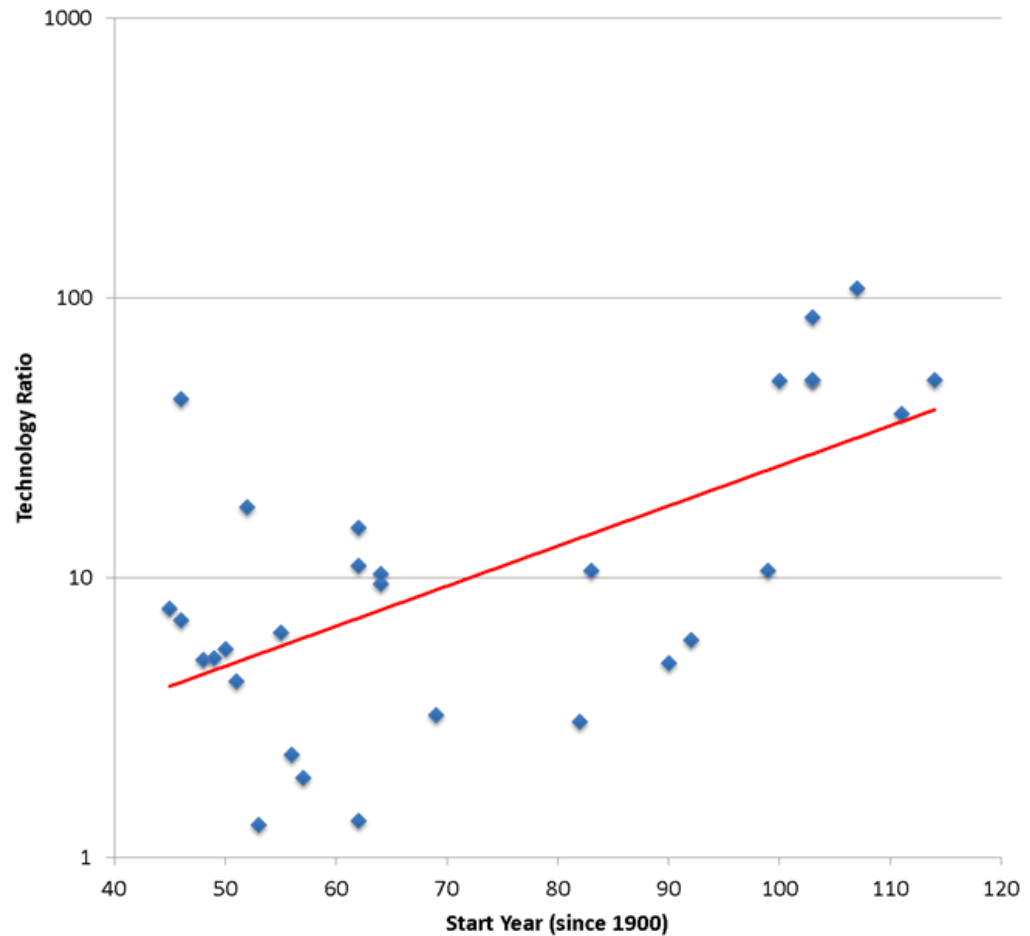
Military Dimension

- Force Ratio
 - UK and partners : enemy
 - Trend downward but not significant
- We are probably using smaller forces relative to the threat



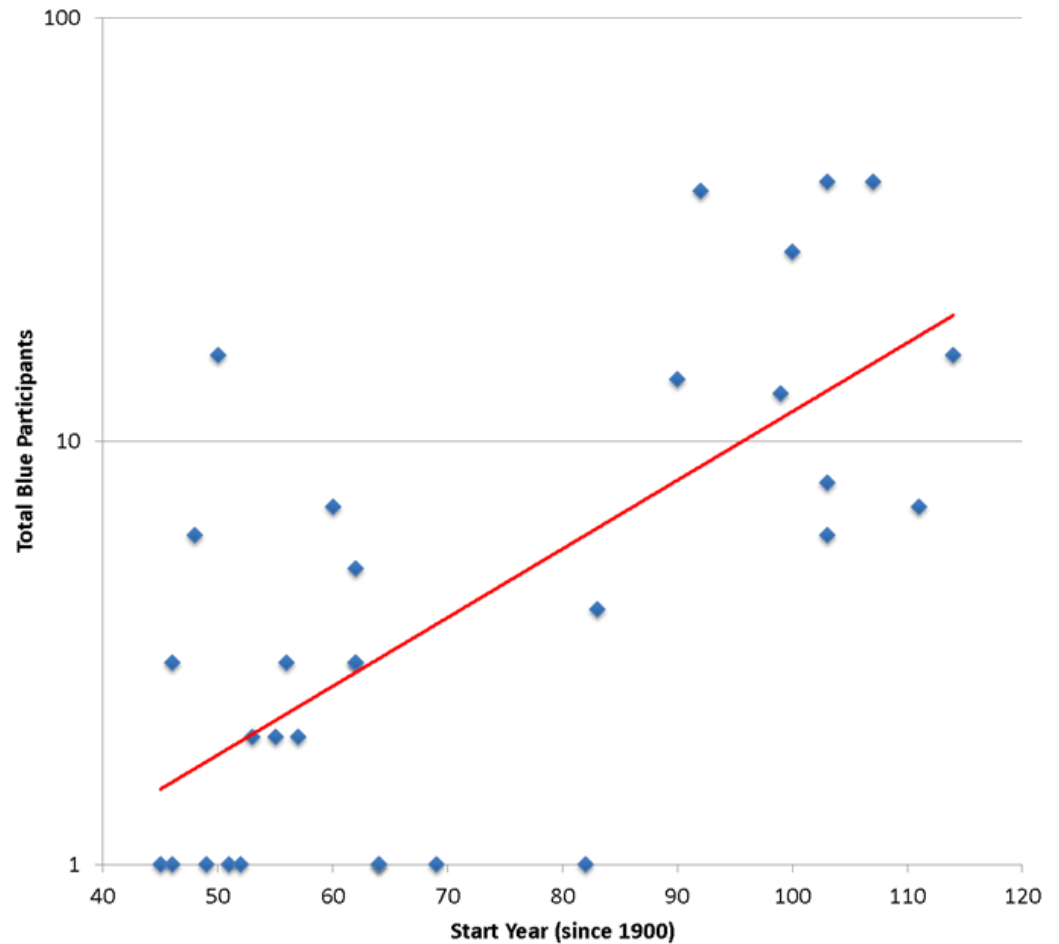
Technology Dimension

- ◆ Defence expenditure per serviceperson
 - UK trend strongly increasing
 - Enemy no significant change
- ◆ We have had increasing technological superiority over our enemies



Political Dimension

- The UK is working with an increasing number of partners

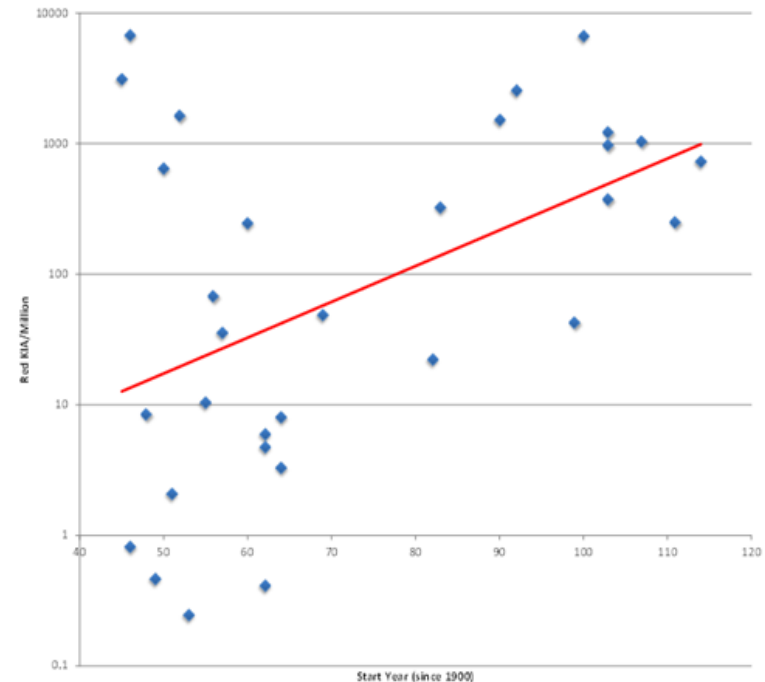
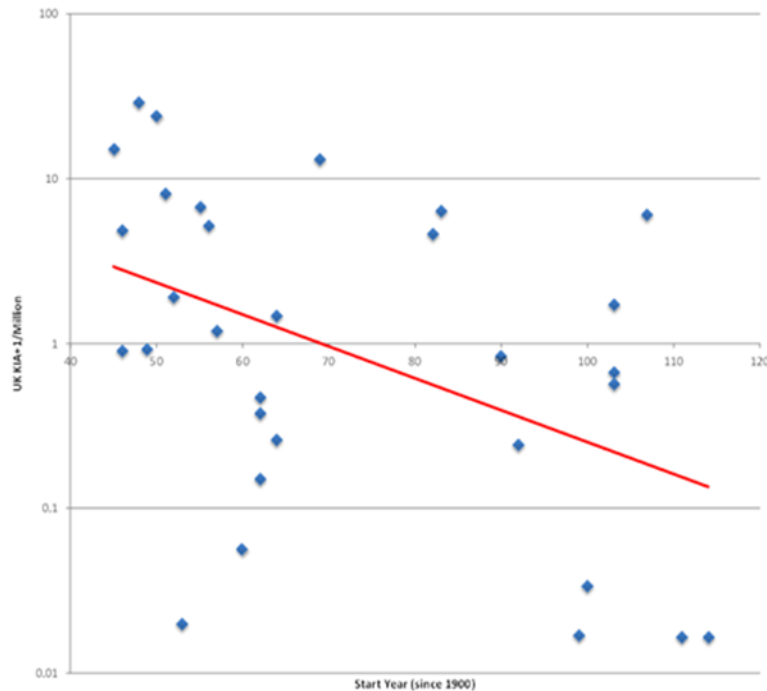


Resource Dimension



◆ Fatal Casualties as a proportion of population

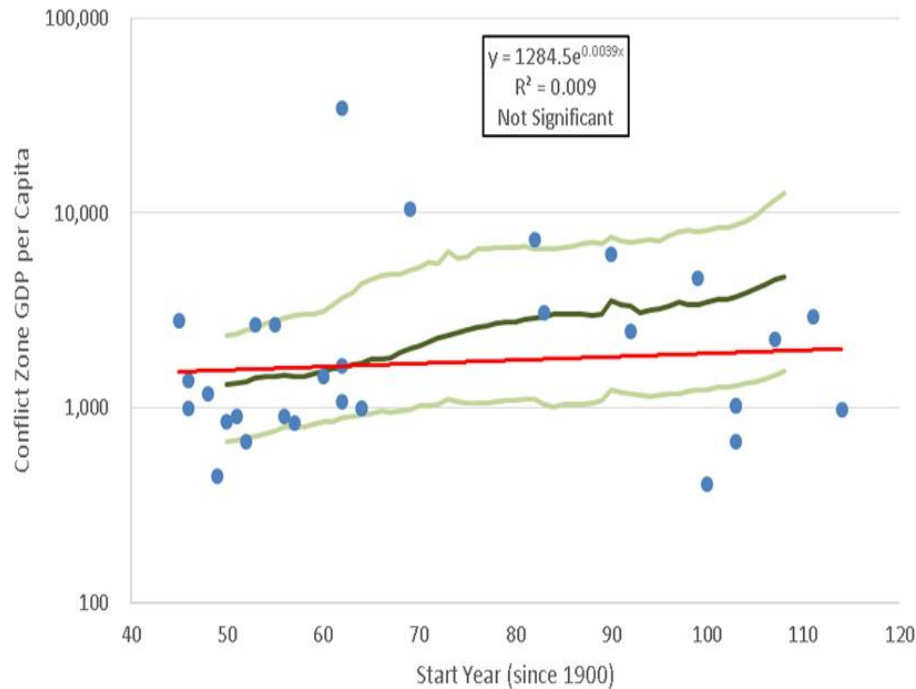
- UK - falls by $4\% \pm 2\%$ pa
- UK and Partners - no trend
- Enemy - rising by $6\% \pm 2\%$ pa
- Smaller, high tech forces win the combat, even if that doesn't always win the war.



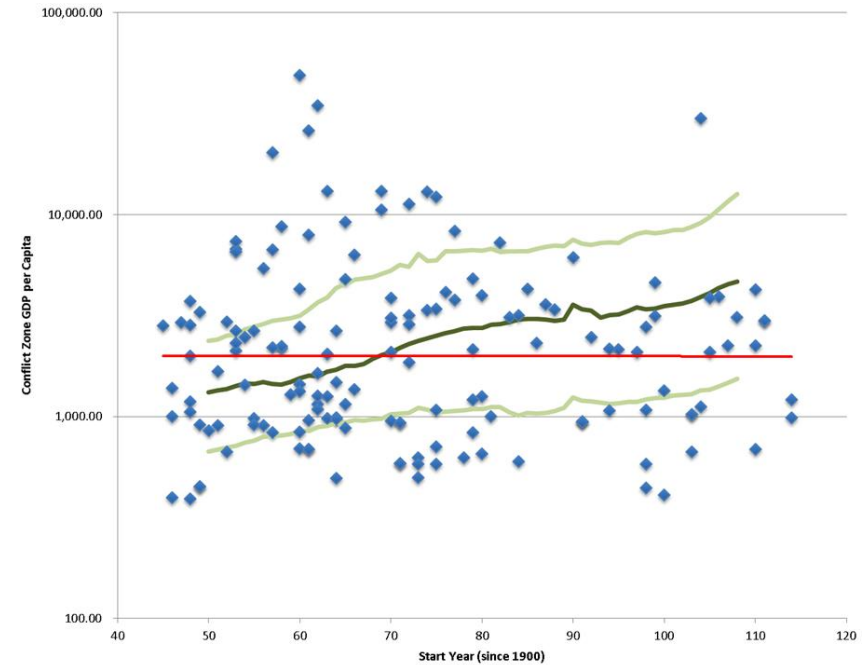
Social Dimension



- No significant trend in GDP per capita in crisis location.
 - surprising as world GDP has increased 3 fold over period (green line)
 - Used to deploy to conflicts in 'average wealth' countries; now deploy to relatively poor countries
 - True for both conflicts and non-conflict cases



Conflicts

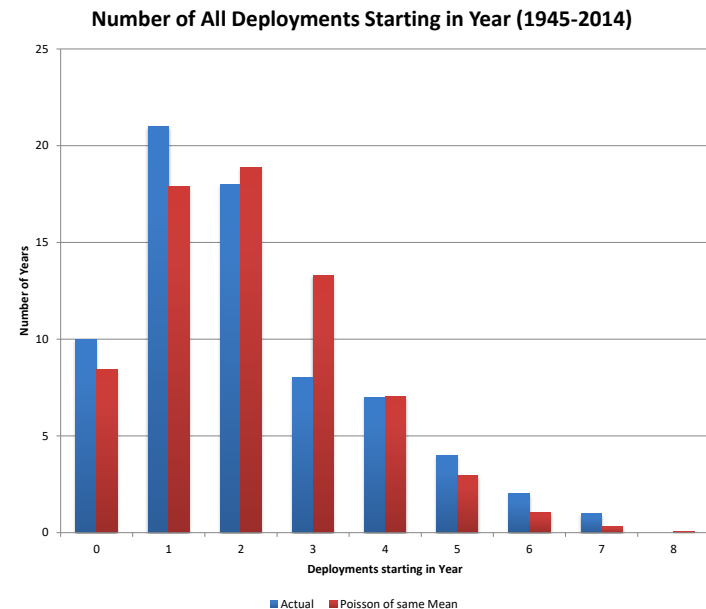
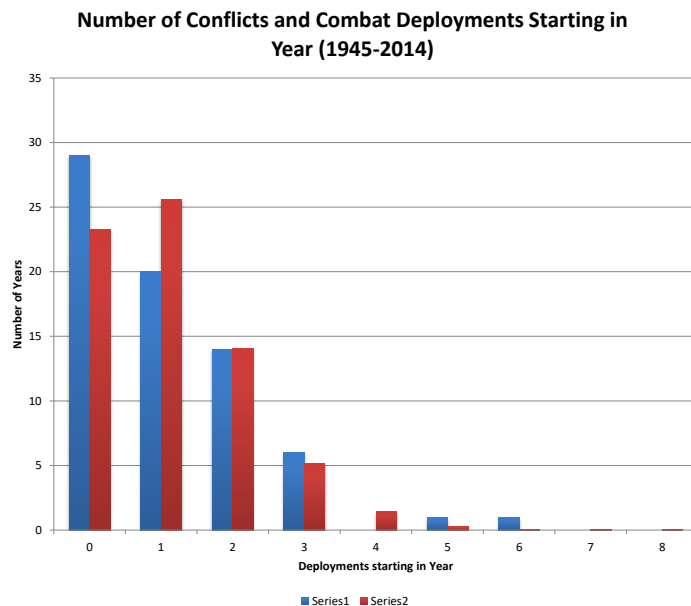


All deployments

Distribution of operations over time

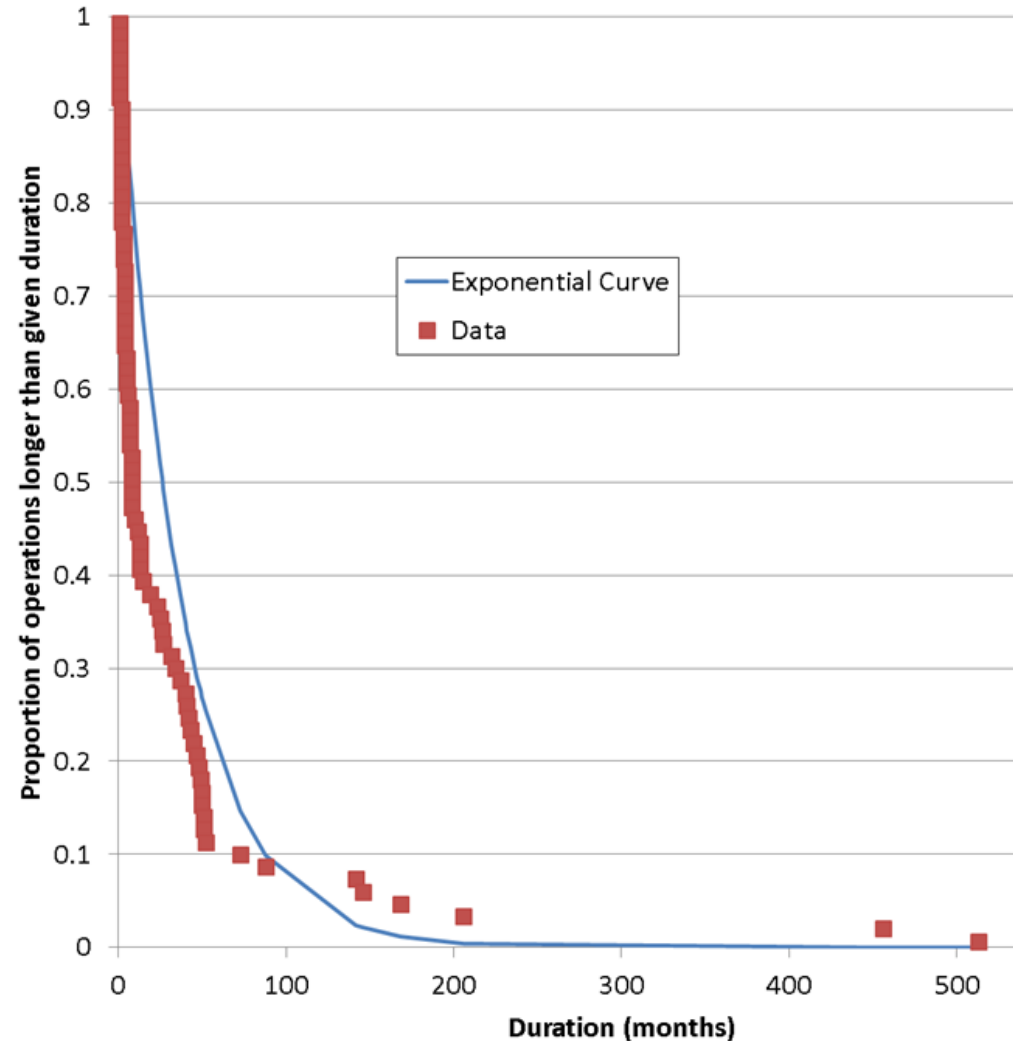
Independence of deployments

- If deployments occur randomly and independently the distribution of times between deployments starting will be a Poisson distribution
 - The actual distribution is a reasonable fit to theoretical distribution
 - The occurrence of operational deployments is essentially random



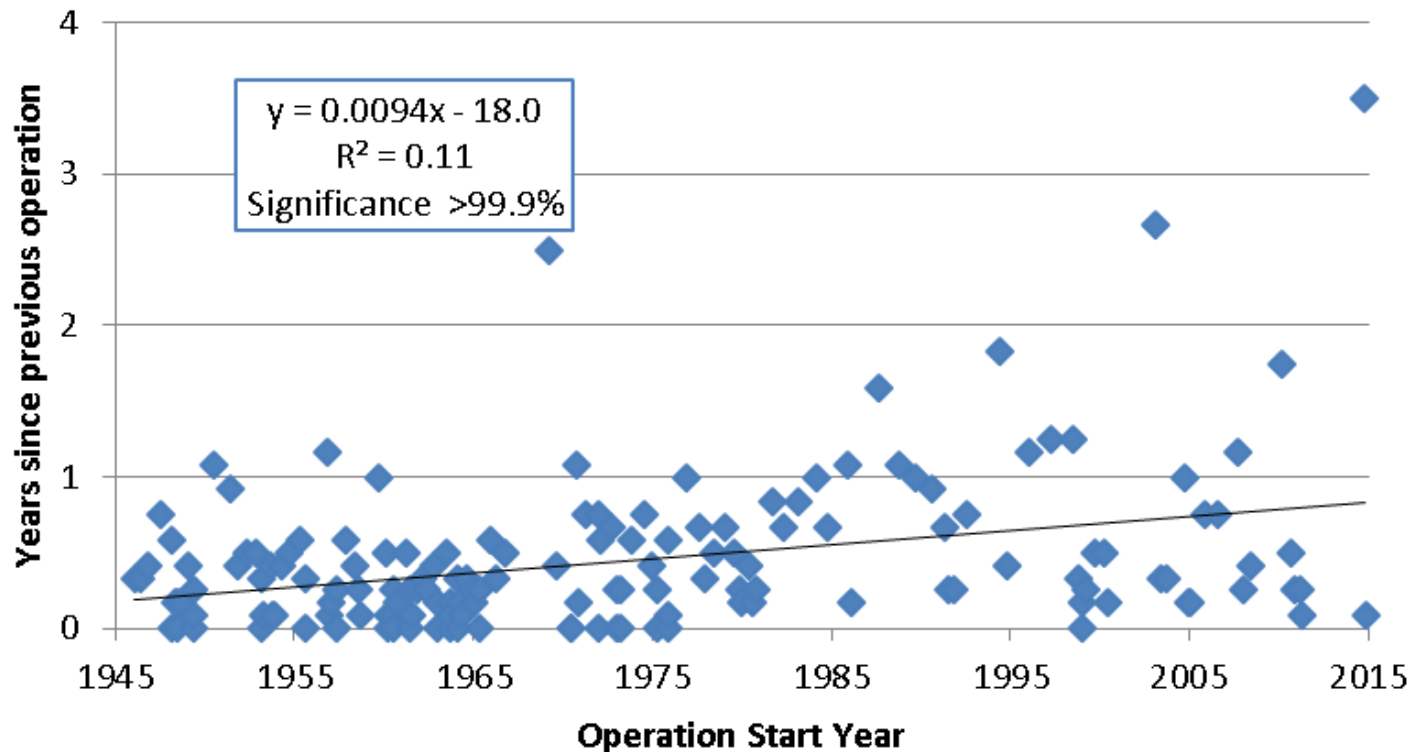
Deployment Duration

- If deployments have a constant chance of ending each year then the distribution of durations will be an exponential curve
 - Not a close fit – far too many long deployments
 - Chance of a deployment ending falls over time
 - UK gets ‘stuck’ in long deployments, over ~ 5 years



Frequency of Deployments

- Time between deployments starting is increasing; frequency is decreasing
 - average number of deployments per year: 1945 - 5.5; 1980 - 2.0; 2015 - 1.2
- Not all operation types affected
 - Big fall in frequency of 'strike' operations (deterrence, coercion, Internal Security and COIN)



Conclusions



- Experience of conflict over the past 70 years shows high levels of variability in the scale and nature of operational deployments
- The historical record indicates initiation of deployment is essentially random; extrapolation of recent experience is a poor guide to the next crisis
 - No evidence of interdependence, e.g. war weariness
- Only about half of the operations undertaken were combat deployments
 - But non-combat operations are short duration so only a fifth of time deployed
- The frequency of operations is declining
 - From over 5 per year in 1945 to just over 1 per year in 2015
- Operational time dominated by 'Strike' operations
 - in particular internal security/ counter-insurgency
 - Frequency of strike operations reducing
- Increasing asymmetry in conflicts
 - Smaller, high tech UK forces
 - Coalition operations
 - Lower UK casualties, higher enemy casualties

Credits

