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| Defence and Security marque |
| **RESEARCH PROPOSAL DEVELOPMENT TEMPLATE** |
| Doctoral Research Proposal |
| Click here to enter your Student Number. |
| **Gurkan Yesilyurt** |
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| Thesis Working Title |
| Combat Power Elements and Force Ratios; A Research From the Perspective of Strategy, Leadership and Morale. |

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| Abstract (<50 words) |
| This research will try to find the explanatory power of combat power elements including force ratios under the intermediating effects of Strategy, Leadership and Morale (intervening variables) for the outcome of the battle (dependent variable). I will try to determine the proportions of the variance estimated from the intervening variables. |

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| Supervisor  (If already known): | Dr. Iftikhar Zaidi |

# Section 1

This Section Covers your Proposed Area of Research

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| Initial Research Question or Hypothesis |
| Research Question-1: What is the degree of explanatory power of combat power elements including force ratios on the outcome of the battles fought between state actors? |
| Research Question-2: What is the leverage of leadership and morale on the outcome of these battles? |
| Initial Null Hypothesis to be tested:  Hₒ: Material elements of combat power elements are correlated with the outcome of the battle.  Hₒ: Material elements of combat power elements are correlated with Leadership and Morale.  Hₒ: Leadership and morale factors are strongly correlated with the outcome of the battle.  Hₒ: When effects of Leadership and Morale are removed, material elements of combat power are no longer related with the outcome of the battle. |
| **Research Objectives** (List what you hope to achieve from this research) |
| I hope to develop a mathematical model which will identify explanatory powers of material and nonmaterial elements as predictors of victory or defeat at the battlefield. With this research, I will try to prove the magnitude of the impact of the two most fundamental non-material components of combat, namely leadership and morale, on other elements of combat power and outcome of the battle. |
| **Background** (why this topic – why is it important and why it warrant (further) research?) |
| * In the beginning combat power and force ratio was a subject of skilled soldiers like Sun Tzu, Clausewitz and others. In the 1900s, the subject attracted the attention of engineers like Lancaster. At this stage, mathematical formulas were used to explain the importance of the subject. * With the rapid development of technology, the subject has become the subject of operational research. Researchers like Depuy and Briddle have examined the subject with the help of well-designed mathematical models. * Especially Briddle added very important dimension to the subject with inserting a non-material variable to the research model, which is force employment. * I think this issue, which has been examined in many aspects so far, should be examined in terms of Leadership and Moral factors. * I think this subject is also worth to attention because; the abilities of modern programming languages like Python have potential to exploit the already in place information to the level hard to imagine even at the end of the century. Calculation and analysis capability of this discipline that framed in the field “Data Science” provides useful tool for explaining the variables once more with different dimensions. |
| **Study Value** (Who would benefit from your work and how?) |
| The results of this research would be utilized in wargaming.  The resulting model can be used to predict future conflicts in the next stage (with adding machine learning algorithms).  This research can take its place in the literature as it examines the effects of strategic management, leadership and morale on the results of combat quantitatively. |
| **Positioning: From a disciplinary perspective which field or fields of study does your research span?** |
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| **Theoretical / Conceptual Framework(s) Considered** (leave blank if unsure) |
| Click here to enter text. |
| **New Knowledge (PhD Only)** |
| Click here to enter text. |

## Initial Top Level Literature

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| Include here the key texts and your critique (this is what has led you to identifying and justifying the problem): |
| Click here to enter text. |

# Methodological Considerations and Research Design

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| Methodology, Methods and Research Design (Include here your initial thoughts on planning and organisation; implementation of your project (establishing knowledge base, data collection plan) |
| Click here to enter text. |
| **Data Sources** (Type of data and where will you find them? include here any pre-identified issue regarding access to these data. Also include a brief statement on your data management plan) |
| Click here to enter text. |
| **Data Analysis** (what and how 🡪 the Process. You should Include the descriptive and interpretive analyses of data and how that connects back to the hypotheses and/or the research questions(s). |
| Click here to enter text. |

# Research Ethics

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| List here any perceived ethical considerations and how you propose to address these: See CURES |
| Click here to enter text. |

# Your Outline Programme of Work

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| Identify here the key activities that you propose to undertake over the course of your project (You may like to do this as a Gant Chart below: |
| Click here to enter text. |

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| **Activity** | **Jan** | **Feb** | **Mar** | **April** | **May** | **June** | **July** | **Aug** | **Sep** | **Oct** | **Nov** | **Dec** | **Comments** | |
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| Potential Supervisor (s)  (If identified or leave blank) | | 1) Click here to enter text.  2) Click here to enter text.  3) Click here to enter text. | | |
| Signed: | Click here to enter text. | | Date: | **Please select** |



**CDS Template for Research Proposals**

**(2-4 sides of A4 paper)**

**RESEARCH QUESTION/TITLE:** Define a clear and succinct question that your research seeks to answer. It should contain the keywords to reflect the intellectual focus of your proposal.

**PROBLEM DEFINITION**: Outline the research area of interest, with a brief, selective and critical review (assessing strengths and weakness) of some of the relevant literature: to show your understanding of the main debates and issues in your research area. Include a very brief statement on why your research is useful.

**Importance and Value of your Research**: Highlight its originality and/or significance as to why you think the research is worth doing and who might benefit from it.

Describe how you would persuade potential supervisors of the importance of the work, and why you are the right person to undertake it. Describe your expertise and give evidence of your own competence in the field.

**RESEARCH DESIGN**: Explain how you will do the research – the analytical framework and methodology you propose to use, and it’s appropriateness for answering your research question(s). This section will vary significantly for empirical/experimental and theoretical/philosophical research approaches, as well as for qualitative, quantitative and mixed methods of analysis. Say whether you intend to use existing data/sources or collect your own, and outline the tools you will use, e.g. experimentation, modelling, surveys, interviews, observations, case studies. Highlight any special equipment or software that might be required. Be realistic about what can be accomplished as well as explicit about any assumptions or hypotheses the research method rests upon.

Identify timelines to the research activities (i.e. list them in a Gantt chart).

**ETHICAL CONSIDERATIONS:** This para is mandatory even if you do not expect to encounter ethical issues.

**LIMITATIONS**: Highlight any potential constraints that you envisage that you may encounter.

**PROJECT MANAGEMENT**: Include a timeline which shows you will be able to complete your research within the allotted time (Submission date is 30 January 2020 ). Key stages (which may overlap) are likely to include: refining the research proposal: literature review; developing research methods; data collection/fieldwork; analysis and evaluation of data; writing the draft; final submission.

**RESOURCES**: Identify any resource (i.e. equipment, IT or training) that you may require in order to undertake this research. Make clear any complex involvement of outside departments, organisations or people.

**LIST OF REFERENCES:** Provide a bibliography or list of references consulted in constructing this proposal.

**SUPERVISION**: Please note the name if you have either had contact with a potential supervisor or have identified a potential supervisor but not yet made contact.

**NB – Please do not feel obliged to follow the exact format of this template. It is intended for use as guidance only, should you require assistance whilst preparing your proposal.**