

# Empirical Analysis of Current Operations to Support Planning

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## Abstract

Current UK Operational planning is based upon the identification of observable effects. These are derived from the strategic aim and encompass effects in both the physical and cognitive domains. There has, however, been a lack of analysis of empirical data on effects in the cognitive domain. This study aims over a 3-year period to quantitatively investigate relationships between UK/Coalition activities across a range of contemporary operations and a number of different factors with respect to local perceptions and in-theatre public support for UK/Coalition forces.

To date, empirical data has been collected for Iraq and Afghanistan on UK/Coalition activity levels, civilian casualty levels, local/international media output, levels of insurgent activity and local public opinion.

Statistical analysis was conducted in order to identify associations between the above factors. This allowed the identification of quantifiable associations between UK/Coalition support and people's perceptions and concerns over a range of factors including; utility supply, local security, governance and corruption, health, economy and so on.

The study ultimately aims to extract lessons for current operations in Afghanistan but also to identify any key and enduring relationships in order to provide a general framework to operational commanders in stabilisation operations.

## **INTRODUCTION**

UK Doctrine envisages operational planning based on the identification of observable effects, derived from the strategic aim, in both the physical and cognitive domains. The physical domain is reasonably well understood, however there is a lack of analysis on empirical data on the effects in the cognitive domain. This study aims to quantitatively investigate relationships between the UK/coalition activities in current operations and a number of different factors with respect to local perceptions and public support for the UK & coalition forces. Initially this work focused on Iraq and then moved on to looking at Afghanistan.

In order to carry out an empirical analysis, sources of useful data were identified including UK/coalition activity levels, civilian casualty levels, local/international media output, levels of insurgent activity and local public opinion.

For Iraq, sources of data that were used to carry out the analysis included public opinion polls conducted throughout 2003 until 2008, and additional polling information and public utilities data from US academia (Brookings Institute). Information on civilian casualties was obtained from the Iraq Family Health Survey, which details deaths from violent and non-violent means. A statistical analysis was conducted to identify any quantifiable associations between people's perceptions and concerns over their utility supply, security in their area, etc, and support for the UK/coalition forces.

For Afghanistan, public opinion polls conducted throughout 2006 to 2009 were used and civilian casualty data was obtained from the Afghanistan Index produced by the Brookings Institute. Analysis for Afghanistan focused primarily on the provinces of Helmand and Kandahar, where we sought to identify relationships between people's satisfactions and dissatisfactions with life in Afghanistan and their perceptions of the International forces, Government of Afghanistan (GoA), Afghan National Police (ANP) and Afghan National Army (ANA).

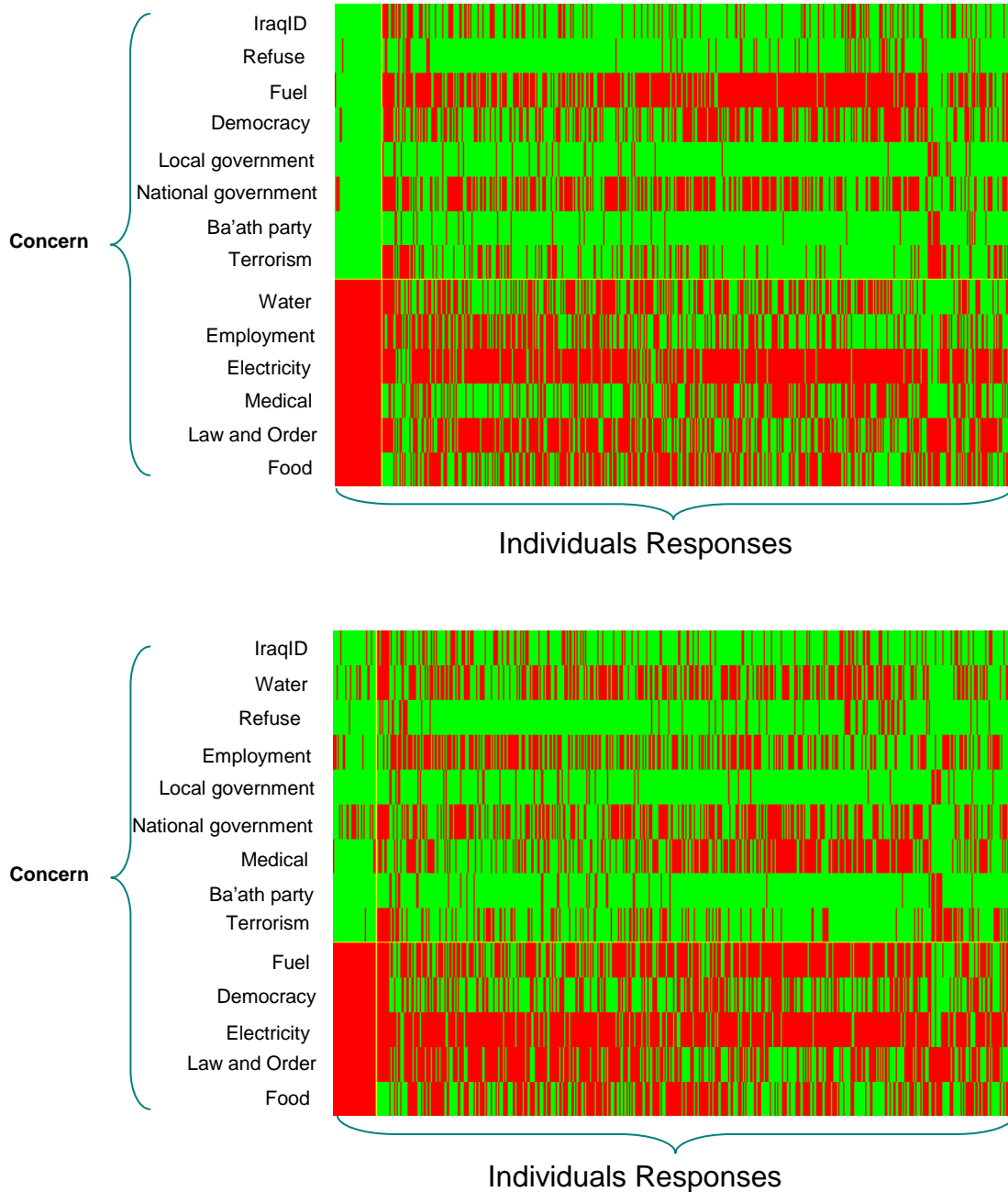
The planned end state for the overall study is to provide general framework guidance on the key activities to undertake/avoid, how particular courses of action are likely to play out with the local population, and how to balance kinetic/soft effects in COIN/MASD type operations - i.e. to highlight some generic 'rules of thumb' for stabilisation operations.

## **IRAQ ANALYSIS**

### **Public Opinion and the Provision of Utilities**

A correlation was found between the actual electricity supply (Brookings Institute information) and local people's opinions of their electricity supply. This may appear obvious but it might not have been the case; for example people could have said that the electricity was bad whether or not it had improved or their response could have been highly correlated with their opinion of coalition forces and therefore suggested greater dissatisfaction over time when electricity supply was in fact improving. This result is important because it suggests that we can use local opinion about provision of services as a proxy measure of the actual delivery of services. For services, such as sewage or household waste disposal, for which it can be hard to obtain reliable data, this could be useful. People were also asked to rate a number of factors on how important they were to them. Over a seven month period delivery of services such as electricity and water, and disposal of sewage consistently came out as a higher priority than security

A bi-clustering analysis was conducted using poll data, with the aim being to try and identify whether people who supported, or were opposed to, attacks on the coalition had similar concerns over utilities and services. To do this people were clustered according to their concerns and then tested to see whether people with similar opinions/concerns of their services had similar opinions of the coalition. It was found that people who have similar concerns also often share the same opinion of attacks on the coalition.



**Figure 1: Example clusters of Iraqis grouped by their concerns. People polled are along the x-axis, the factors they are concerned about are in red (green indicates this person did not think of this factor as one of their primary concerns). Top chart – those who didn't supported attacks. Bottom chart – Those who did support attacks**

For example, only 8% of the 108 individuals whose top concerns included water, employment and medical services didn't support attacks on the coalition (Figure 1 – top chart), compared to 50% of the population as a whole. In contrast, 80% of those questioned whose priorities and concerns included fuel and democracy supported or strongly supported attacks on the coalition (Figure 1 – bottom chart).

Concerns about law & order and the availability of electricity and food were characteristic of both people who supported the coalition and those who did not. Therefore, concern about these factors by themselves cannot act as predictors for coalition support. These results highlight the fact that people who are against or support the coalition may share similar individual concerns. However when groups of concerns are analysed, people can be more clearly classified.

The next stage of the analysis was to develop and test the feasibility of a predictor model of support for the coalition from people's opinions and concerns. This should enable us to begin to understand the potential effects of improvements in, for example, electricity supplies upon support for multinational forces. The model was trained on poll data over a week in 2008 in which approximately 1000 individuals were asked to rate their concern regarding the factors below on an eleven point scale, as well as whether they thought attacks on coalition troops were justified.

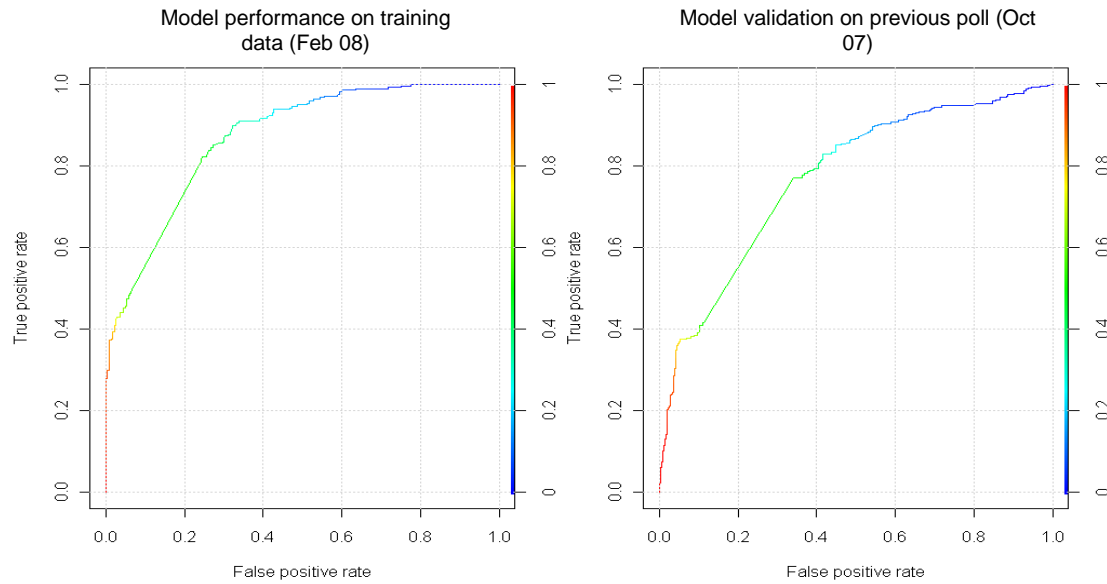
The factors that people were asked to rate their concerns for included:

- Security and safety
- Availability of jobs
- Availability of electricity
- Traffic and congestion
- Availability and quality of health service
- Corruption in society
- Prices of goods and services
- Availability of basic goods and services
- The system of justice/fair trials
- Violence by government officials or ISF
- Democracy with directly elected representatives
- Freedom to express personal opinions

Using just the individuals from the one poll that this model is based on, a Receiver Operating Characteristic (ROC) curve analysis, where minimising the area above the curve is desirable, shows that the performance of the model at classifying those individuals according to their support for the coalition and the factors above is good (Fig. 2). Looking at the values that were obtained, at a true positive rate (sensitivity) of 40%, i.e. the correct identification of 40% of all people who think attacks on coalition troops are justified, the false positive rate (1-specificity) is under 2%, i.e. less than 2% of all people who are against attacks on the coalition are misclassified by the model as in fact supporting attacks.

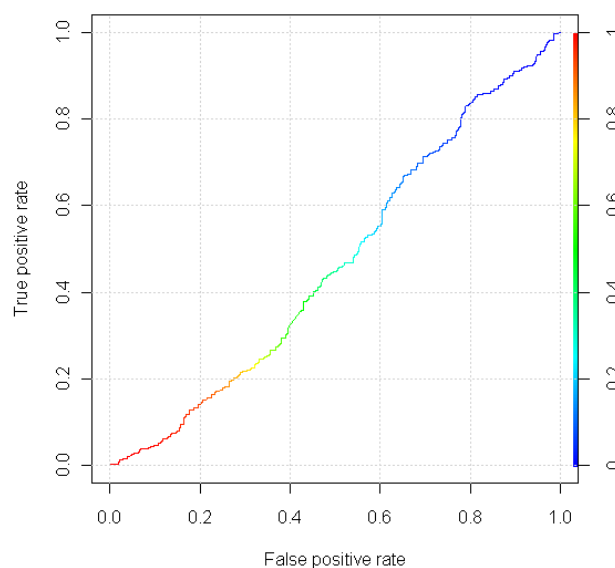
The model was then validated using a similar poll that was also asked to a different set of 1000 people in the same districts (Fig. 2) approximately 3 months before. The

model unsurprisingly performed less well, with a true positive rate of around 38% the false positive rate was still only around 5% however.



**Figure 2: Performance of Basra model at predicting those people who support attacks on the coalition.**

As this model was based on results obtained from just one district of the country, it was further tested to see if it represented the country as a whole. It was found that this model is specific to the district that it was based upon and the concerns of people in this district and their association with whether or not they support attacks on the coalition are not characteristic of the whole of the country (Fig 3). The false positive rate and true positive rate are approximately equal in this case; hence the model is an ineffective predictor nationally. This highlights that the links between priorities and support for attacks on the coalition differs between the various regions of Iraq.



**Figure 3: Performance of Basra model at predicting support for the coalition from people across Iraq.**

## Factors relating to Civilian Casualties

Using the US academic data on public opinion the association between casualty rates and public opinion where the public were asked “Do you think Iraq today is generally heading in the right direction or the wrong direction?” is relatively weak, with a regression coefficient ( $R^2$ ) of 0.31, although significant at the 98% level. This is not least because there are at least 3 apparent outliers in the 16 data points (Fig. 4).

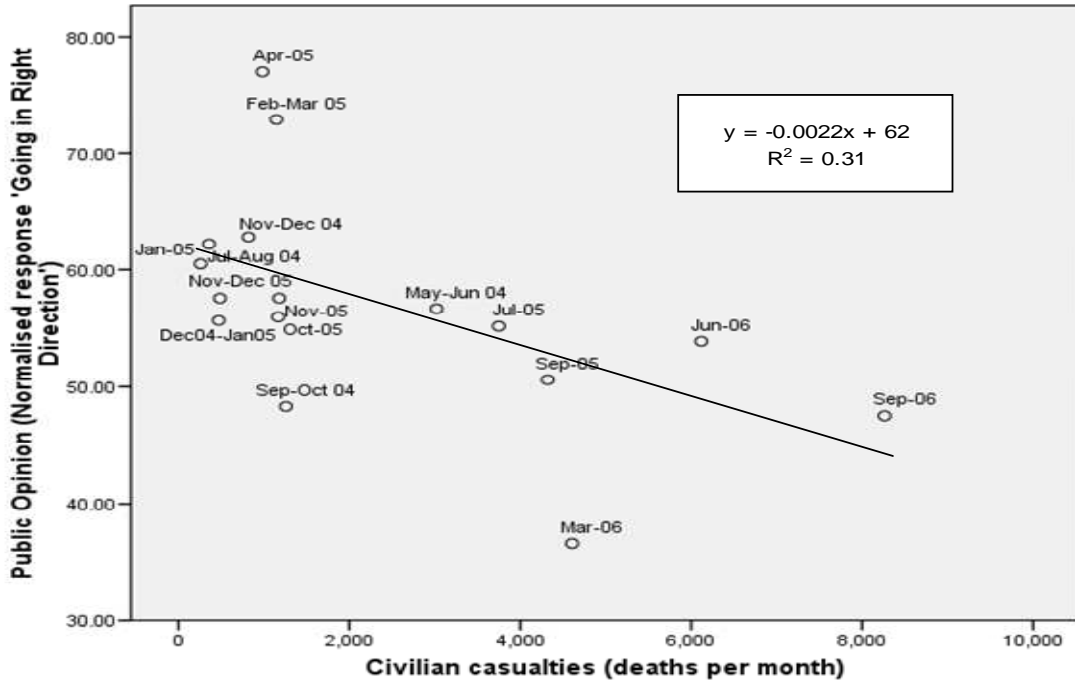


Figure 4: Polling response plotted against civilian casualty rate

The 2 high ‘outliers’ correspond to polls in the first quarter of 2005, whilst the low ‘outlier’ corresponds to March 2006. It is not enough to explain the increase in positive public opinion with the low casualty rates alone but more than likely it is mainly due to the period up to April 2005 corresponding to the first National elections; and the reflection of the local ‘feel good’ factor. Civilian casualty rates in March 2006 had risen by 60% or so since a low in autumn 2005, but public opinion was even lower than would be expected from this. This can probably be attributed to the February 2006 bombing of the golden Mosque in Samarra, one of Shi’ite Islam’s holiest shrines. Such an outrage would naturally lead people to think that things were not “going in the right direction”.

There is a further possible outlier in September 2004; this corresponds to the failure of initial attempts to pacify the ‘uprising’ in Fallujah and could indicate public disquiet at the failure to deal with the situation. Interestingly, the rating for early December – after the US Marines had re-taken Fallujah in November 2004 – is relatively high, possibly indicating public acceptance that security was being upheld.

If the 3 principal outliers are removed the association becomes much stronger with a regression coefficient ( $R^2$ ) of 0.45 and significance at the 98% level. The simple casualty model is robust enough under normal circumstances but major events can also drive public opinion strongly.

## AFGHANISTAN

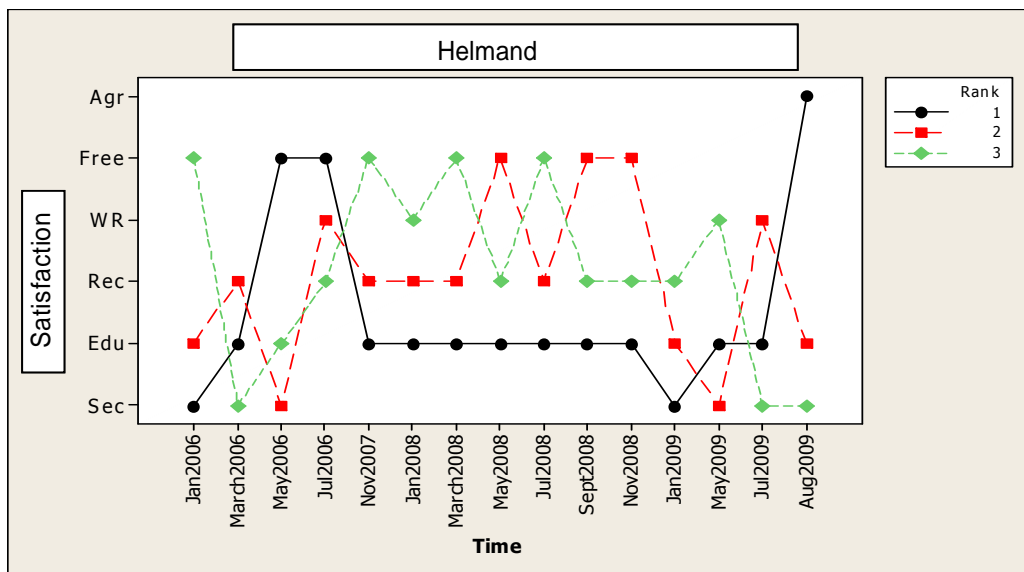
In order to further understand the relationship between physical activities and cognitive effects, the focus of our research moved onto looking at Afghanistan, in particular OP Herrick. The study adopted the same analytical approach as that used for the Iraq work; to identify correlations between public opinion, the activities of UK/coalition forces and other significant factors, as well as the effect of civilian casualties, to determine how military activities affect local public opinion. One key consideration for the Afghan analysis was opinion and perceptions of the performance of the indigenous forces – the Afghan National Police and Army.

### Analysis

Afghanistan data was obtained from 15 polls of Afghan respondents conducted between January 2006 and August 2009. The polling was carried out across 12 regions of Afghanistan. The analysis reported on here focuses upon two provinces, Helmand and Kandahar, as these were particularly relevant to British forces and their actions. The polling data emphasised questions that sought to reveal how the local population felt about a range of factors that had potential effects upon them. In essence, what they were satisfied or dissatisfied with, how they felt about the presence of international forces and whether this had any relationship to their dissatisfactions, as well as their perceptions of the Government of Afghanistan (GoA), the Afghan National Police (ANP) and the Afghan National Army (ANA).

### Key Satisfactions

People were asked to select their top three satisfactions. The analysis focused on top choices only. Helmand and Kandahar were examined separately to determine whether there was any difference between regions (Figure 5). The results for Helmand identified education, security, reconstruction, women’s rights, freedom and agriculture as the main satisfactions. Education was predominantly the top choice. The same satisfactions were also expressed in Kandahar province with education again being the consistent top choice over 13 of the 15 polls. Security, reconstruction and freedom were also strongly represented.



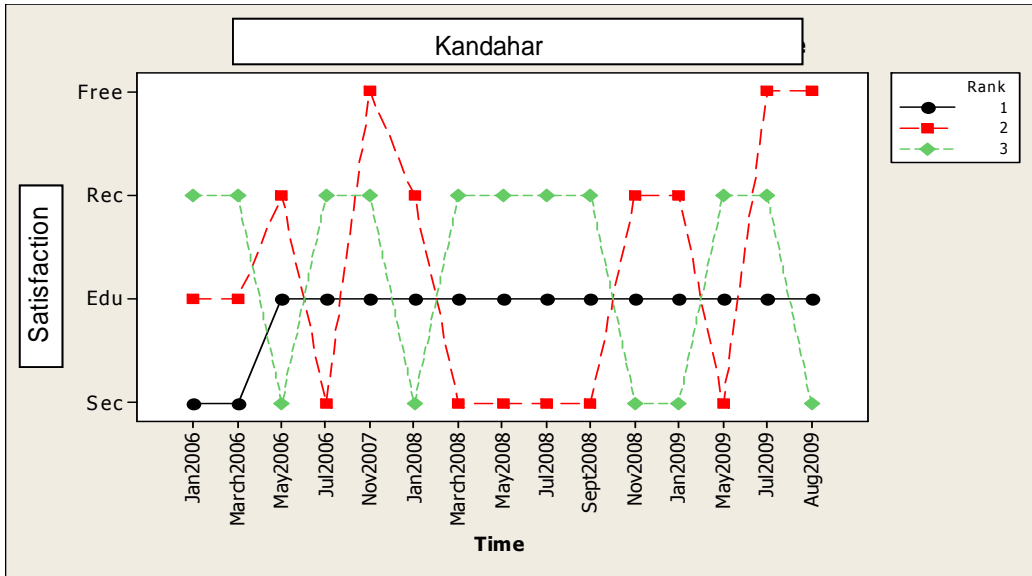
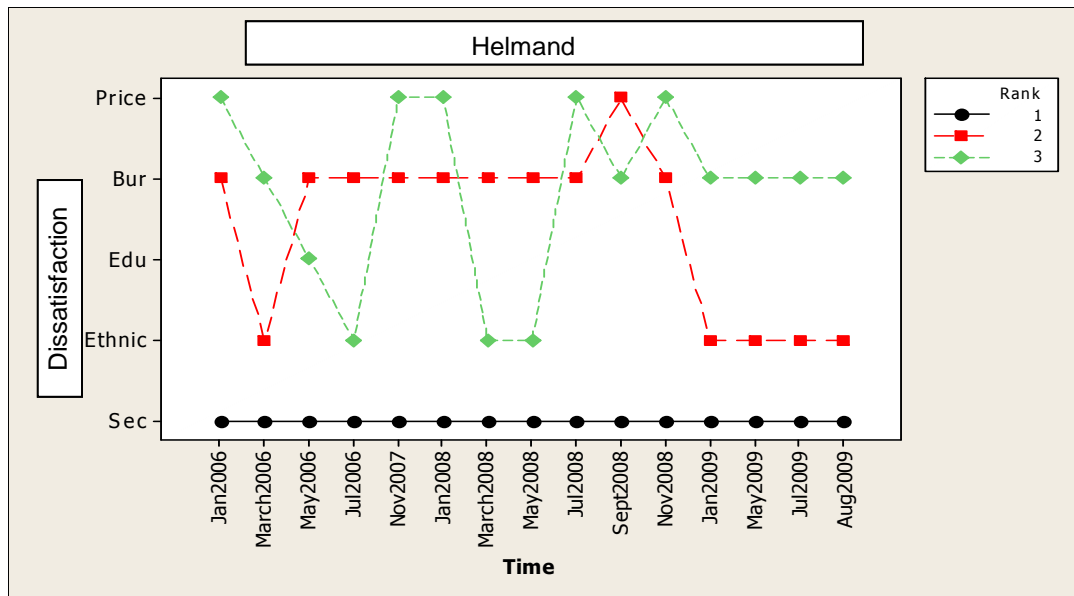


Figure 5: Top Satisfactions in Helmand and Kandahar<sup>1</sup>

**Key Dissatisfactions**

Probably of more interest was to determine what people were most dissatisfied with and whether there were any significant changes over time that might be attributable to specific key events. Overall, analysis of the polling waves for both Helmand and Kandahar (Figure 6) identified concerns relating to security; fighting, local conflicts and warlords, as the top dissatisfactions, followed by bureaucracy and high prices for Helmand and bureaucracy and ethnic problems for Kandahar. Furthermore, for both Helmand and Kandahar the percentage of people who considered security concerns as their primary dissatisfaction was between 40%-50% across all of the polls, with ethnic problems, bureaucracy and high prices averaging 10% each.



<sup>1</sup> Key to graph axes. Agr – Agriculture, Free – Freedom, WR – Women’s rights, Rec – Reconstruction, Edu – Education, Sec – Security.



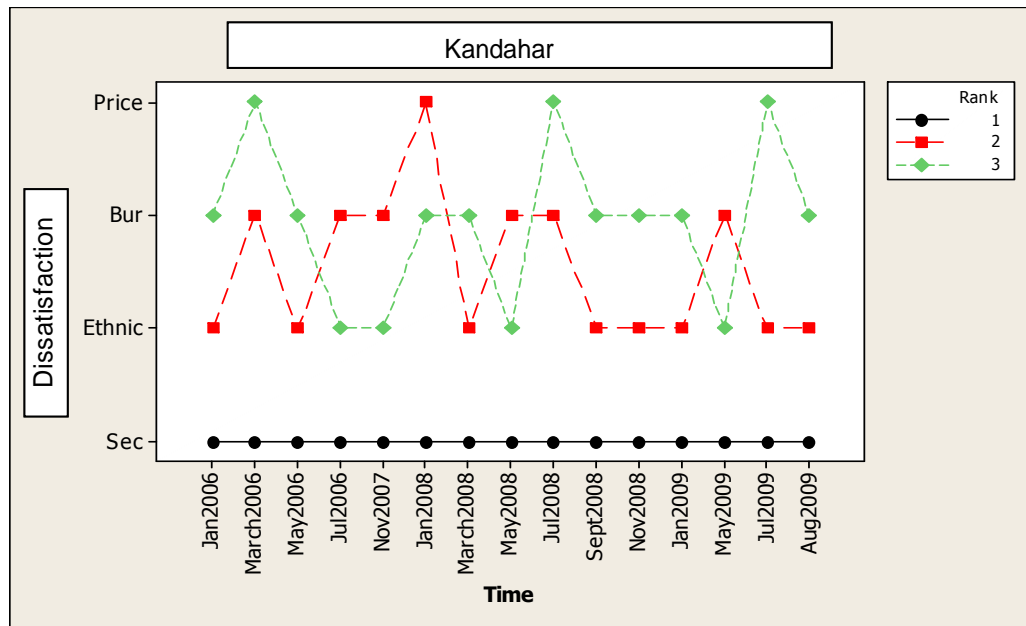


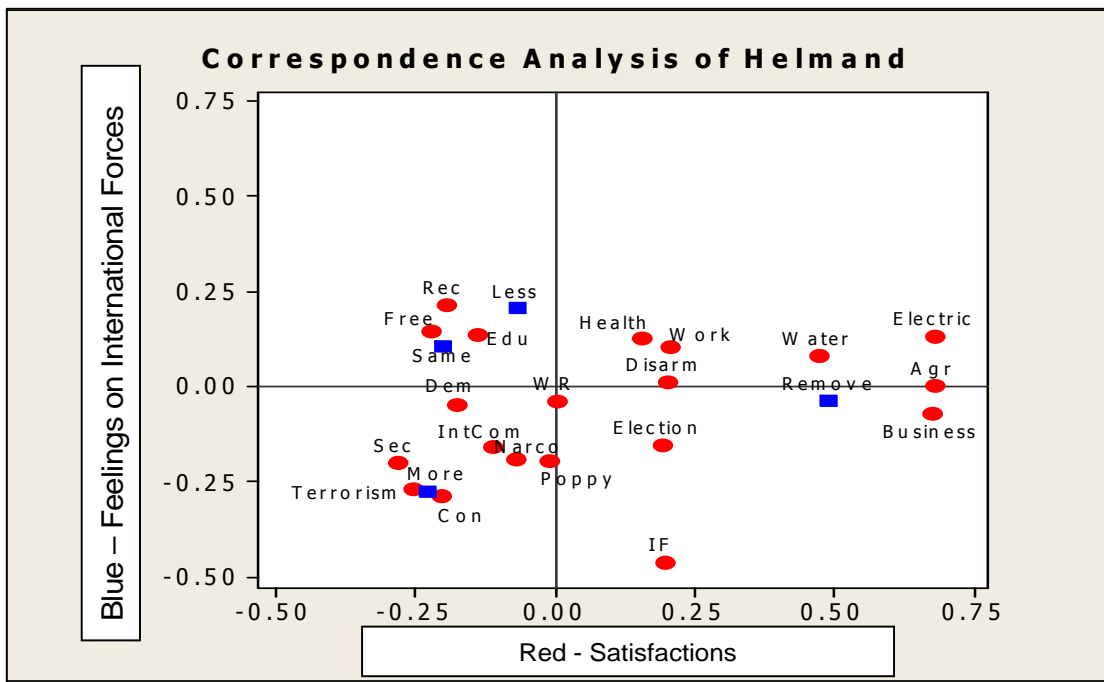
Figure 6: Top Dissatisfactions in Helmand and Kandahar<sup>2</sup>

### Correspondence Analysis

In addition to direct analysis of the individual poll questions, correspondence analysis was undertaken that compared answers to questions to determine whether any emerging trends could be identified. For example, was there any relationship between opinions on the presence of coalition forces and dissatisfactions? To do this analysis, responses to the questions on dissatisfactions and feelings regarding the presence of international forces were tabulated in a two-way contingency table. Correspondence analysis was then used to create a visual representation of the association between responses. In the resulting plot, the distance between points is a measure of the similarity between the two responses, i.e. the closer they are the more likely someone is to pick those responses to both questions. Other potential relationships were also explored with mixed results. This had the potential for development of a basic prediction model similar to that for Basra, where public concerns were used as a predictor to whether they supported attacks on the coalition or not. The Afghanistan opinion polls however, did not specifically request direct views on attacks on the coalition. Instead this question was phrased differently to allow public perception about the presence of international/coalition forces to be defined.

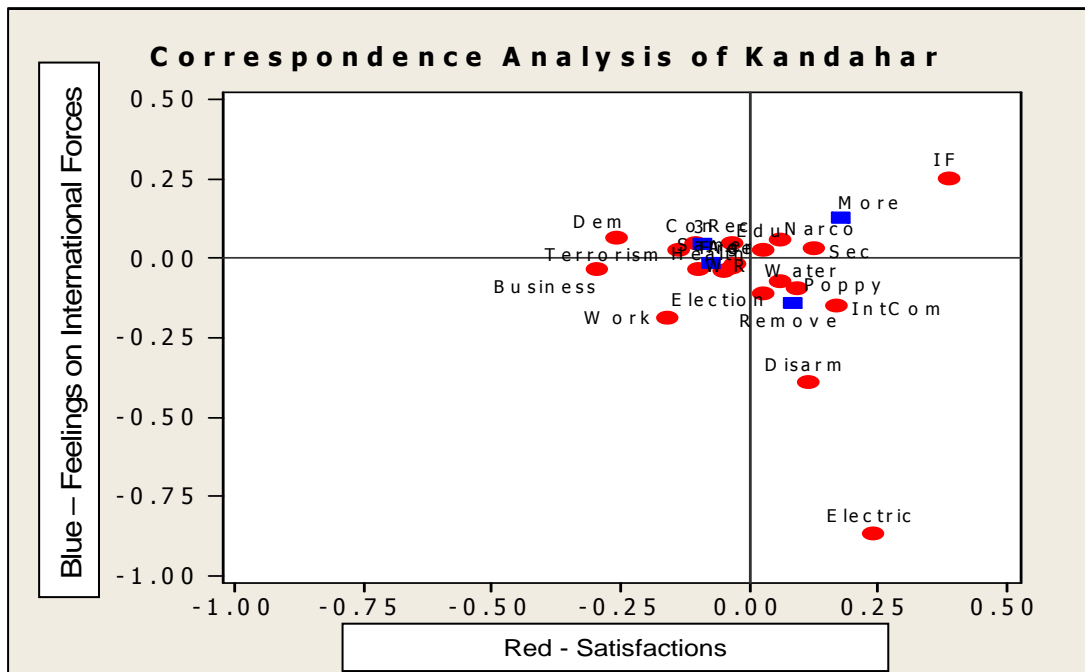
Figures 7 and 8 show the linkage between questions pertaining to the general satisfactions and the presence of coalition/international forces for Helmand and Kandahar respectively. This is determined by examining how closely responses to each of the questions are positioned on the plot. The position of each response alone does not reveal any information; rather it is the position of the answer to one question relative to the second question that reveals the similarity in the two responses from each individual. Examination of the Helmand correspondence analysis revealed that those Afghans that wanted an increase in coalition forces were associated with satisfaction responses regards; removal of terrorism, increased constitution and improved security. Those respondents that desired a removal of coalition forces were more satisfied with water supply, electricity, agriculture and the business environment.

<sup>2</sup> Key to graph axes – Price – High Prices, Bur – Bureaucracy, Edu – Education, Ethnic – Ethnic Problems, Sec – Problems relating to security (fighting, local conflicts, warlords)



**Figure 7: Helmand responses to feelings on the presence of international forces and top satisfactions**

However, examination of the Kandahar correspondence analysis identified no clear relationships with a general clustering of all responses (Figure 8).



**Figure 8: Kandahar responses to feelings on the presence of international forces and top satisfactions**

Similarly, no clear relationships could be discerned from poll data analysis of both Helmand and Kandahar for dissatisfactions and views on the International forces.

Additional correspondence analysis examined potential relationships between satisfactions and dissatisfactions and:

- a. Views on the Government of Afghanistan
- b. Views on the Afghan National Police and Afghan National Army.

No apparent relationships between people’s dissatisfactions and their perception of the GoA, ANP and ANA were identifiable as the correspondence analysis highlighted a general clustering effect. This is not all together unexpected due to the high percentage of people stating that ‘problems relating to security’ were their biggest dissatisfaction (45-50%).

**Overall Satisfaction**

People were polled regards their overall satisfaction with life in Afghanistan based upon a - Very Satisfied, Satisfied, Neutral Opinion, Dissatisfied or Very Dissatisfied rating. Responses for Helmand and Kandahar were separated to allow comparisons.

Helmand analysis identified that for 2008 the highest percentage of people (~55%) were Satisfied with the overall current situation. This however was observed to drop across succeeding waves of polling to ~25% in August 2009. The Very Satisfied also witnessed a decrease from a high of ~30 % to a low of ~3% as at November 2008, but then rising again in the final poll to ~20%. Conversely, those respondents identified as Very Dissatisfied were consistently <10% until the end of 2008, but rose sharply thereafter.

After Nov 2008, both the Very Dissatisfied and Very Satisfied for Helmand were observed to increase at the same rate, although at the time of the final poll data the Very Satisfied and Very Dissatisfied began to diverge as shown in Figure 9 below. It would be interesting to see how these two responses develop as a consequence of the operational and tactical changes occurring in Helmand province since the final poll in August 2009.

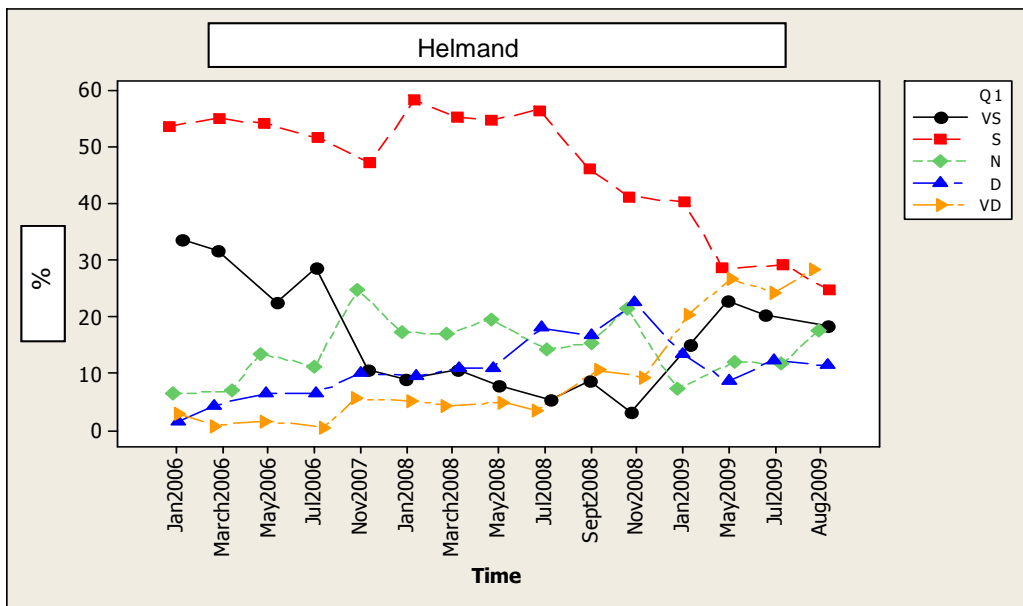
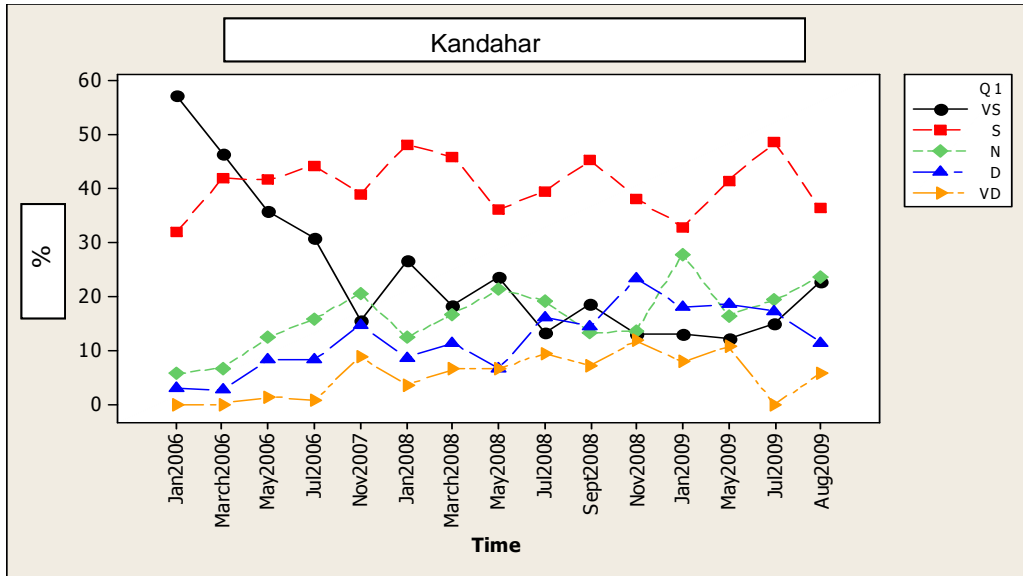


Figure 9: Public satisfaction with overall Helmand situation



**Figure 10: Public satisfaction with overall Kandahar situation**

For Kandahar, responses tended to the same general pattern as for Helmand. In the first poll the percentage response for Very Satisfied was close to 60% but decreased sharply to ~10% in Nov 2007 before stabilising around 15-25% across the remaining polls. Comparison of the Helmand and Kandahar responses for Very Dissatisfied revealed that Kandahar responses only exceeded 10% on two occasions and unlike Helmand there was no significant change across the polls.

Overall from 2006 through to mid 2009, whilst Kandahar has remained generally Satisfied, Helmand has transitioned from a Satisfied state to one in which a Very Dissatisfied perception was in the ascendant.

### Public perceptions of Coalition Forces, GoA, ANP and ANA

In line with the previous approach, based upon a - Very Satisfied, Satisfied, Neutral Opinion, Dissatisfied or Very Dissatisfied rating, additional correspondence analysis was between overall Satisfaction and:

- a. Views regarding the Coalition Forces
- b. Views regarding the Government of Afghanistan
- c. Views regarding the Afghan National Police
- d. Views regarding the Afghan National Army

Correspondence analysis regards Overall Satisfaction and perceptions of the UK/Coalition Forces drew the same conclusions as for the previous correspondence analysis reported earlier. For both Helmand and Kandahar relationships were identified wherein; those Afghans that were Very Satisfied also wanted more coalition forces, Afghans that were Satisfied wanted coalition forces to remain, whilst Afghans who were Dissatisfied/Very Dissatisfied wanted coalition forces to leave. However, whilst the analysis could not definitively conclude that overall satisfaction was directly linked to the presence of coalition forces, the presence of international troops did contribute to Afghan people's perceptions of the situation.

Similar conclusions were drawn regards correspondence analysis of people's perceptions with respect to the GoA, the ANP and the ANA. In all three cases, distinct correlation was found between the five satisfaction ranges – VS, S, N, D, VD and equivalent views regarding the Afghan government, police and army.

## Opinions and changes over time

### International / Coalition Forces

Further analysis was conducted to identify any significant changes across the waves on people's opinions towards coalition forces, the Government of Afghanistan, Afghan National Army and Afghan National Police.

The Helmand analysis identified that from the start of 2008 the majority of people either wanted more coalition troops or the number to remain the same (Figure 11). However, with the influx of additional UK and particularly US troop numbers; this view has decreased over time.<sup>3</sup> By the last of the polls, with the number of coalition troops effectively doubled; these responses accounted for around 10 %, whilst responses for those wanting the coalition forces removed have increased significantly to ~40% and rising as at August 2009.<sup>4</sup>

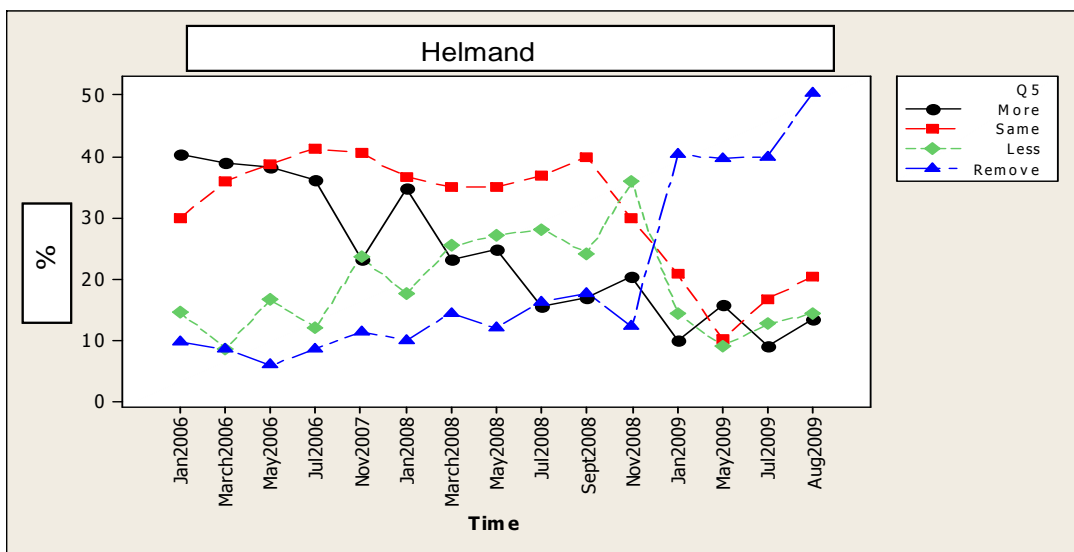
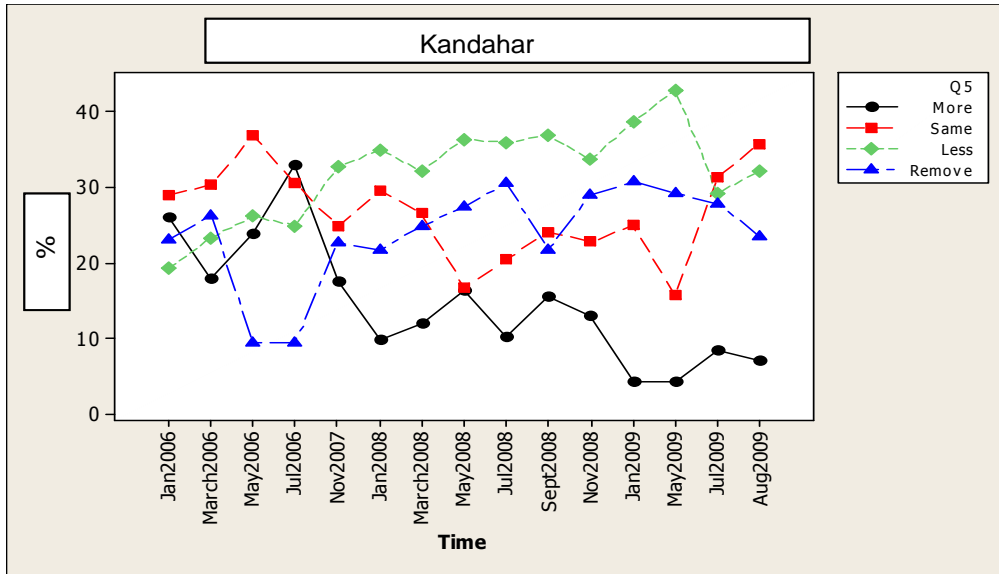


Figure 11: Satisfaction with International Forces in Helmand

<sup>3</sup> Prior to April 2008 there were 5500 UK troops reinforced by Danish and Estonian contingents. At August 2009, UK numbers had increased to 9000 with an additional 5000 US Marines in Helmand and plans for a further 9000 US troops to be deployed there during 2010.

<sup>4</sup> November 2008, the number of people polled in Helmand was doubled from 500-1000 in order to include more districts and this may account for the sudden increase in apparent dissatisfaction.



**Figure 12: Satisfaction with International Forces in Kandahar**

In Kandahar a similar pattern is observed with a few notable differences (Figure 12). A sudden increase in the number of people wanting to see coalition forces removed was observed in the November 2008 for Helmand but was not evident for Kandahar where a decrease was seen for those wanting coalition forces withdrawn. No definitive Helmand event could be identified that attributed to this occurrence. Instead, this appeared to be linked to the inclusion of new regions within Helmand, as well as a doubling from 500 – 1000 of the number of respondents.

Overall, there was a gradual shift across the polls for both Helmand and Kandahar. From public opinion initially supporting the presence of coalition forces in both provinces, the situation in late 2009 was one of a predominant desire for a withdrawal in Helmand as opposed to retention of a similar or reduced presence in Kandahar.<sup>5</sup>

### Government of Afghanistan (GoA)

There are no obvious patterns emerging when comparing Helmand and Kandahar regards opinions on the Afghanistan government. Overall in both Helmand and Kandahar there was a general satisfaction with the GoA, however:

- a. Helmand (Figure 13) – Those polled as Very Dissatisfied with the GoA increased over time from ~3% in January 2006 at the start of OP HERRICK, up to ~30% in August 2009. In tandem with this, general satisfaction with the GoA has almost halved over the same period. Again a significant change occurred around November 2008, when general satisfaction was observed to drop sharply. This was again at the time when the number of those polled in Helmand doubled.
- b. Kandahar (Figure 14) – The dominant response over time has been a general satisfaction although Very Satisfied showed a significant drop across 2007-2008, but followed with a gradual rise thereafter. Overall indication is that for Kandahar there was an overall satisfaction with the GoA.

<sup>5</sup> The deteriorating situation in Helmand was recognised and has since resulted in the influx of large numbers of US marine forces allied to an increase in UK military personnel. Helmand at the time of this report is consequently very much a 'work in progress'.

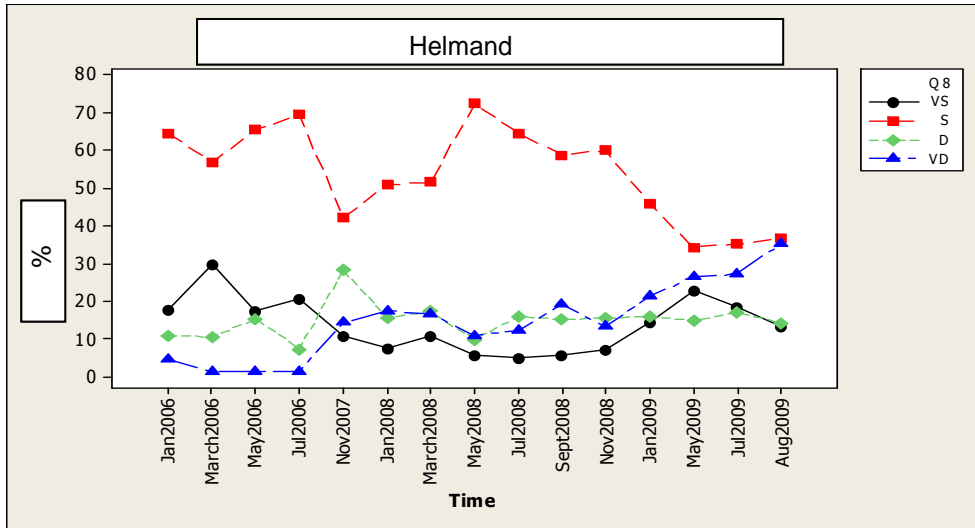


Figure 13: Satisfaction with Government of Afghanistan in Helmand

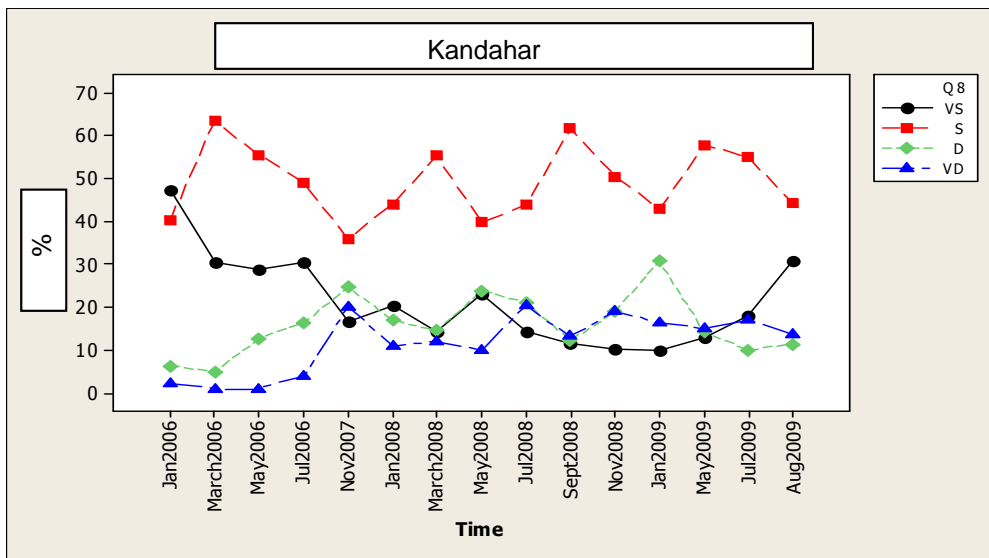


Figure 14: Satisfaction with Government of Afghanistan in Kandahar

### Afghan National Police (ANP)

The results for opinions and changes over time on the ANP in Helmand and Kandahar can be summarised as follows:

- a. Helmand (Figure 15) - Overall people appear generally satisfied with the ANP across all polls although this has shown a steady decline since July 2008. Those responding Dissatisfied and Very Satisfied remained constant across all of the waves. Very Dissatisfied respondents however, although reasonably constant up until Nov 2008, thereafter have increased sharply from ~10% to ~45%. This would indicate that for Helmand confidence in the ANP is declining.
- b. Kandahar (Figure 16) - People were generally satisfied with the ANP with a shift from Satisfied to Very Satisfied responses being recorded from the beginning of 2009. Oscillations for these two responses are observed across the waves of poll data. The Dissatisfied and Very Dissatisfied

responses remained fairly constant, although from Jan 2009, the percentage of those responding Very Dissatisfied was more than twice that of the previous wave.

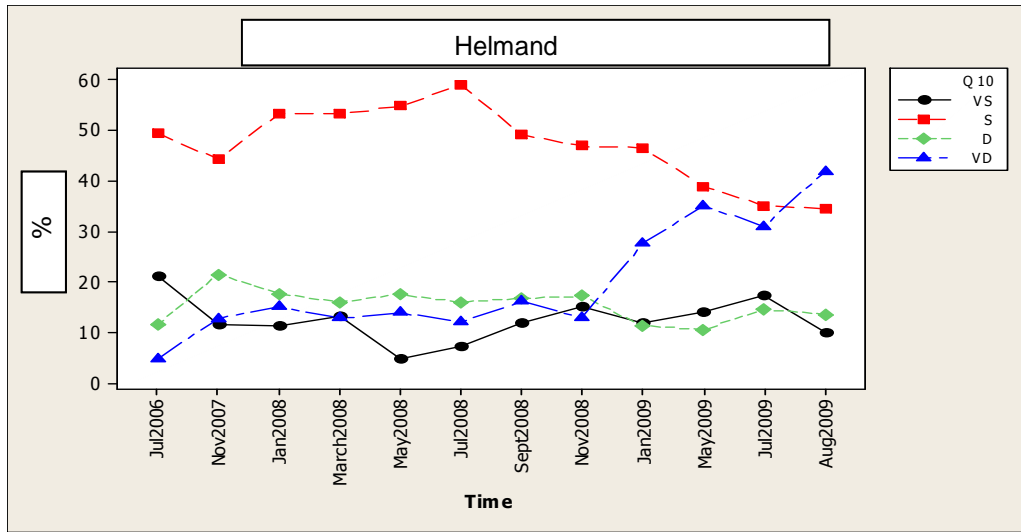


Figure 15: Satisfaction with ANP in Helmand

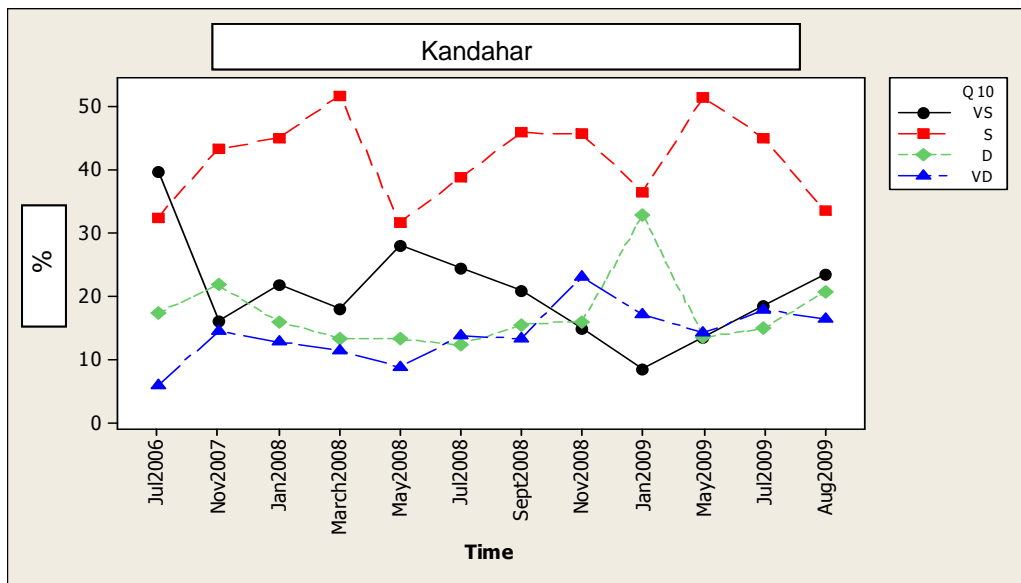


Figure 16: Satisfaction with ANP in Kandahar

### Afghan National Army

Whilst Afghans in Helmand province were overall generally satisfied with ANA performance, this opinion declined after November 2008 in tandem with an initial sharp increase in Very Dissatisfied responses. This latter opinion has furthermore continued to rise.

The situation for Kandahar is markedly different where the majority of those polled expressed a high degree of satisfaction over time. Those responding Dissatisfied and Very Dissatisfied remained fairly constant and low across all waves of poll data.



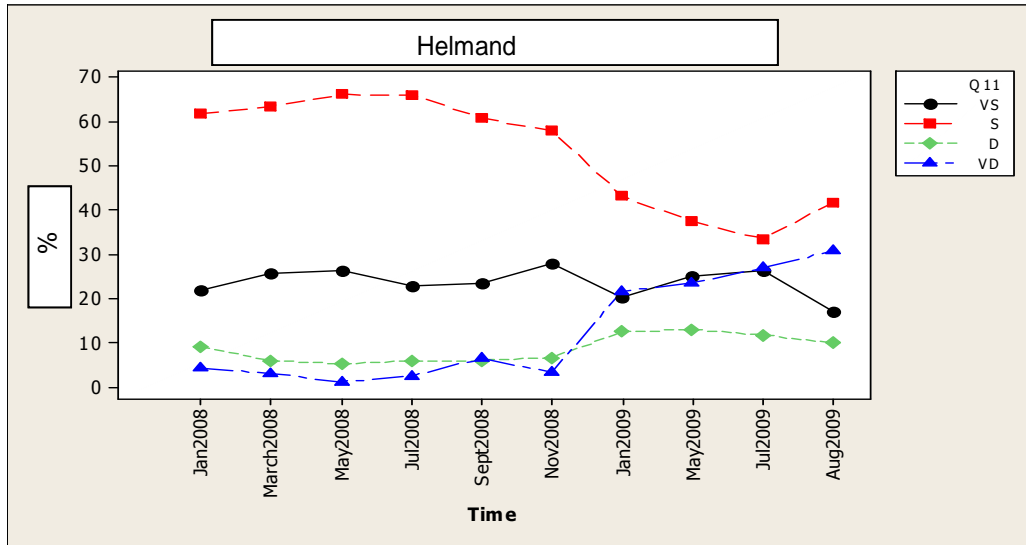


Figure 17: Satisfaction with ANA in Helmand

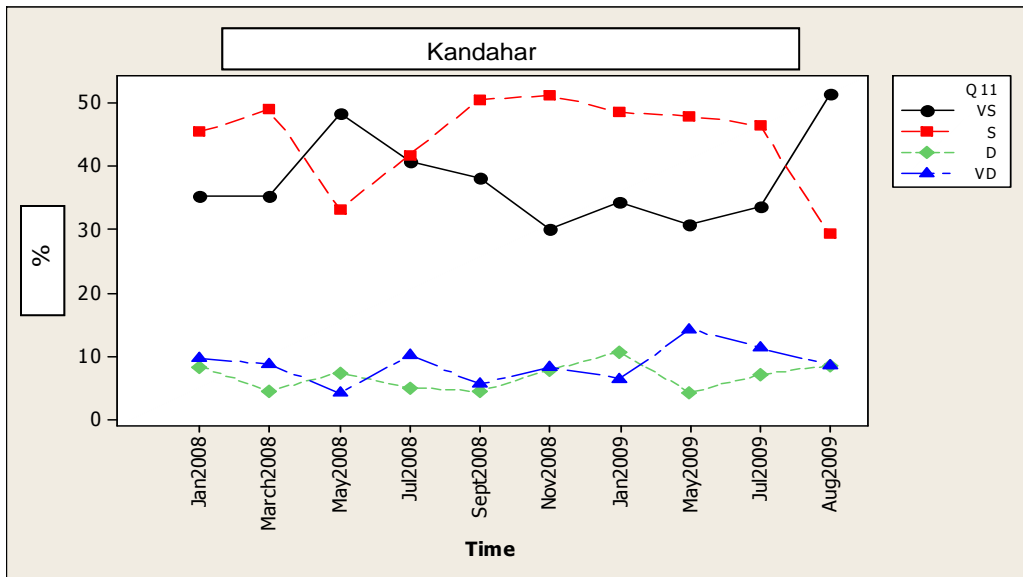
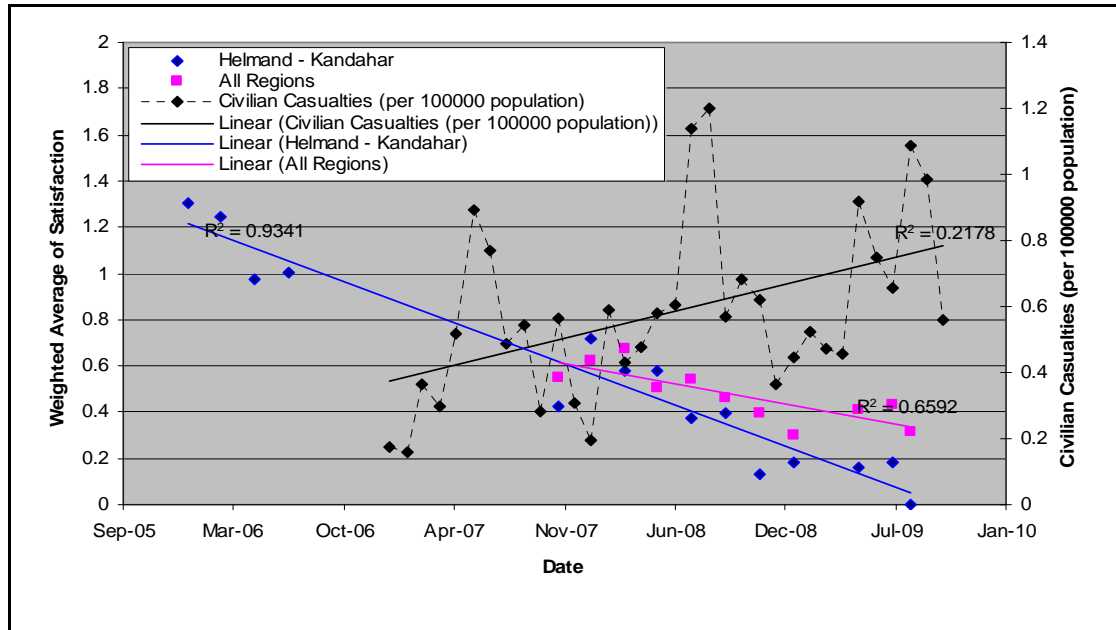


Figure 18: Satisfaction with ANA in Kandahar

### Overall Satisfaction and Civilian Casualties Analysis

Two other separate pieces of analysis were conducted that sought to link people's overall satisfaction across the poll data with civilian casualties over time.

The question 'How satisfied personally are you with the current situation in Afghanistan?' formed the basis of the analysis conducted for both Helmand and Kandahar responses across all polls. The possible responses were Very Satisfied, Somewhat Satisfied, Neither Satisfied or Dissatisfied, Somewhat Dissatisfied and Very Dissatisfied. These responses were given a weighting factor of +2, +1, 0, -1 and -2, respectively. Figure 19 shows the relationship between civilian casualties and overall satisfaction over time.



**Figure 19: Afghanistan civilian casualties and overall satisfaction over time**

For Overall Satisfaction, the results show that after the average weighting was plotted against time (blue) and a linear trend line was added and an  $R^2$  of 0.9341 was obtained. For Helmand and Kandahar the overall satisfaction decreases linearly with time. From November 2007 – August 2009 (red) the average satisfaction was determined for all of the regions polled, this also showed a similar relationship to Helmand/Kandahar where there was a decrease in overall satisfaction with time.

It appears that from the end of 2008 overall satisfaction decreases quicker in Helmand and Kandahar compared to that observed for all of the provinces/regions combined. Prior to this date the poll responses were very similar (Nov 2007 – Nov 2008).

Analysis of civilian casualties was drawn from data contained in the Brookings Institute monthly reports.<sup>6</sup> Figure 19 highlights the number of civilian casualties per 100,000 population, based on a population of 28,395,716.<sup>7</sup> Adding a trend line to the graph revealed that over the 22 months from January 2007 to October 2009 inclusive, there was a steady increase overall in the rate of civilian casualties. The separate peaks highlighted in the graph relate to the campaign season and thus correspond to an increased tempo in military/insurgent activities.

Figure 19 further indicates that as the rate of civilian casualties has increased, the average overall satisfaction decreased with time. However, while civilian casualties are a major issue and a contributing factor in the analysis, people's overall satisfaction cannot be solely attributed to this cause. If people's satisfaction with life in Afghanistan was based on civilian casualties alone, it would be expected that a more significant decrease should follow those months where there was a peak in the number of civilian casualties - e.g. after July and August 08. Yet across all the waves there is a continued gradual decline in satisfaction and thus partly attributable to the steady rise in civilian casualties. This piece of analysis was similar to that described earlier for Iraq, where people's responses to the question - 'Do you think Iraq is heading in the right direction?' were plotted against civilian casualties (Figure 4). That analysis observed that people's responses were associated with civilian casualties,

<sup>6</sup> Brookings Institute Afghanistan Index – Jan 21, 2010.

<sup>7</sup> Figure obtained from the CIA World Factbook.

although major events such as national elections also drove people's opinions quite strongly.

### **Analysis across all regions**

Whilst the majority of the analysis has focused on Helmand and Kandahar given that these regions are important from the aspect of the British Forces, some additional analysis was also undertaken on the other regions polled: The areas focused on in the polls were:

- a. How people feel about coalition forces, in particular whether they wanted them all to leave, to have less, remain the same or have more.
- b. Whether people have experienced security problems in the previous 12 months,
- c. How people's dissatisfactions varied between regions.
- d. Satisfaction with the performance of the GoA, ANP and ANA.

As with Iraq there were variations observed between responses from the different Afghanistan regions. For example, the responses to dissatisfactions across the regions were very similar to those in Helmand and Kandahar but there were also regions where these featured hardly at all but instead highlighted major concerns not applicable to Helmand or Kandahar.<sup>8</sup>

For the previously mentioned Basra study, a model was developed for predicting peoples' support for the coalition based on day-to-day concerns. Whilst this worked well for Basra in isolation, the model failed when extended to Iraq as a whole. It was also identified that such a predictive model would similarly fail for Afghanistan due to the variations in responses and feelings from each of the separate regions.

## **CONCLUSIONS**

### **Iraq**

Local people's perception of the availability of services is correlated with the actual supply and thus polling data on the supply of services can be used as a reasonable proxy when data on the actual supply of services is difficult or impossible to obtain.

People who support attacks on the coalition can be distinguished from those who don't by their concerns.

A model has been developed that highlights the strength and direction of associations between people from Basra's concerns and their support for attacks on the coalition. This highlights the feasibility of producing predictive tools for determining an individual's probability of supporting attacks on the coalition that may eventually allow for the identification of the priorities for reconstruction efforts.

It has been highlighted however that the association between peoples concerns and their support for the coalition is location dependent i.e. the concerns of people who support attacks on the coalition differs between regions.

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<sup>8</sup> For instance, poll respondents in Balkh province expressed minimal concern for 'Problems relating to Security' but were very concerned about High Prices – consistently 80-90% of those polled responded NO when asked if they had experienced security problems in the previous 12 months. Other key dissatisfactions across disparate Afghan provinces/regions included; water supply, employment prospects and poor infrastructure.

The results for Iraq do not provide definitive answers as to whether changes in actions by the coalition or increased input in the provision or improvement of services will increase support received from the public but it did give us a number of ways forward for this work with regards to the analysis conducted for Afghanistan. Further analysis of people's concerns and attitudes over time may provide some insights into whether there have been positive changes in attitude if improvements in services have occurred. Two major concerns that were associated with people who supported or strongly supported attacks on the coalition were democracy and the availability of fuel. Could assisting in the improvement in either of these increase support?

It should be noted that the model developed could not act as a predictor for the country as a whole but was location dependent. Therefore a robust model needs to be populated with data from the area concerned.

### **Afghanistan**

The results and relationships identified to date could not provide definitive answers as to whether actions and activities on the part of coalition forces had cognitive effects on the Afghan population in Helmand to facilitate increased public support.

Across the timeline used in the analysis, the primary satisfaction for both Helmand and Kandahar was education.

The analysis identified that for Helmand the top dissatisfactions were consistently Security, Bureaucracy and High Prices, whilst for Kandahar they were Security, Bureaucracy and Ethnic Problems. Whilst many of the other provinces contained at least one of these concerns, there were also provinces where these featured hardly at all but instead highlighted major concerns not applicable to Helmand or Kandahar.<sup>9</sup>

From public opinion initially supporting the presence of coalition forces, there has been a gradual but consistent decline in Afghan satisfaction with the overall situation. As at late 2009 there was a predominant desire for withdrawal of foreign forces in Helmand whilst Kandahar respondents preferred a reduced presence. Similar discontent was identified for Helmand concerning the perception of the government of Afghanistan and the Afghan security forces, although Kandahar respondents expressed a more positive attitude.

As with the Iraq analysis, regional differences emphasised the difficulty of developing a form of predictive model of cognitive effect capable of application to all demographic groups in all situations in all phases of a campaign. Rather, the aspiration should be to provide general framework 'rules of thumb' guidance on the key activities to undertake/avoid in COIN/MASD type operations.

Helmand analysis highlighted significant changes occurring around November 2008 with regards to respondent opinions for coalition forces, government of Afghanistan, ANP and ANA. No such step-change was observed for Kandahar province. The likely explanation is that the number of people polled in Helmand doubled from 500 – 1000, as well as there was the inclusion of new regions within Helmand, that before that time had been under Taliban control.

For Afghanistan, the current analytical approach will be continued in order to accommodate recent operational changes as a consequence of the influx of a large

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<sup>9</sup> For instance, poll respondents in Balkh province expressed minimal concern for 'Problems relating to Security' but were very concerned about High Prices – consistently 80-90% of those polled responded NO when asked if they had experienced security problems in the previous 12 months. Other key dissatisfactions across disparate Afghan provinces/regions included; water supply, employment prospects and poor infrastructure.

US force into Helmand, along with the addition of an increased UK troop presence.<sup>10</sup> The intent is to determine whether success will result from the US-led effort, allied to the adoption of amended tactics, techniques and procedures (TTPs) on the part of coalition forces as a consequence of the McChrystal Report.<sup>11</sup>

Furthermore, empirical data will be collated regards the effectiveness of the ongoing training, mentoring and performance of the Afghan National Security Forces (ANSF) and the contribution this makes to success or failure.

We ultimately seek to develop a basic framework that will categorise key criteria for any future campaign and potentially based upon; population and culture, geography, political environment and level of infrastructure. This could provide a high-level analytical tool that will serve to indicate where UK/Coalition efforts should best be focused to attain optimum likelihood of campaign success.

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<sup>10</sup> Note that this analysis concludes prior to Operations Panther Claw (Sept 2009) and Moshtarak (Feb-March 2010).

<sup>11</sup> COMISAF's Initial Assessment, Headquarters International Security Assistance Force, Kabul – 30 August 2009