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1 Terms of Reference

The following ToRs were agreed between the client, LSE supervisor Patrick Dunleavy and the Capstone Group members:

DFID Capstone - How do citizens in Sudan view public service provision?

Background to the project

- 1. The Republic of Sudan (north Sudan) has a population of more than 30 million (possibly as many as 37 million) people and a GNP of around \$85 billion, giving a per capita income of just over \$2,500. It has been troubled by many conflicts in the east (Darfur) and south of the country, and in July 2011 after years of conflict South Sudan became a separate country.
- 2. The Department for International Development (DFID) is the UK's international aid and development ministry and is active in Sudan. It is based in the capital, Khartoum, and seeks to help Sudan's government normalize and improve. In 2013 DFID paid for a survey of Sudanese citizens' views. Data was collected from more than 2,360 citizens in a stratified random sample spread across all 17 component states in the country, creating smallish sub-samples of around 150 people per state. A number of booster samples were undertaken in areas of interest or areas where it might be hard to get good representativeness otherwise. The survey includes good demographic information on respondents (covering gender, income, and education) and information on their location. A similar survey is also available for 2012.
- 3. The core focus of most of the survey questions is on respondents' experiences of public services and citizens' perceptions of trust in government and component agencies. The style of question wording is similar to that of the World Values Survey.
- 4. The survey questionnaire is available for inspection and shows the full range of questions asked and their detailed phrasing. A sample report is available for the Sudanese contractor that carried out the work. These resources are open for reading.
- 5. In addition, Professor Dunleavy has checked the data set, but we are awaiting the full and final DFID clearance before the dataset can be made available. At that point the data will only be made available to the team selected for this project, under the normal conditions that the data and the analysis made of it are confidential to the client except for LSE exam purposes- and that no data or analysis can be made available to anyone outside the DFID Sudan office without prior permission. Securing the safety of DFID's staff in territory, and their good relations with the Khartoum government, make these provisions very important.

Capstone brief and methods

- 6. The project team will:
 - a) Undertake a systematic review of the available academic literature that may be relevant for the analysis of this survey
 - b) Analyze the 2013 Sudan household survey, and where relevant, the 2012 survey, in order to explore in detail the patterning of survey responses and to develop detailed multivariate models to explain the possible determinants of respondents' perceptions of the quality of public services in education, health, and water and sanitation.
 - c) Develop an understanding of the variations in respondents' views based on geographic, demographic, and socioeconomic factors. Use non-survey data, where

appropriate, to complement the analysis of the household survey data and compare perceptions of the quality of public service provision to variation in the actual provision of services.

d) Consider what policy implications for public service provision flow from the analyses for the relevant actors and how DFID might consider these implications in the context of supporting governance in Sudan.

Timetable and logistics

- 7. Subject to receiving DFID permission to undertake the analysis, the documentation and data for 2013 will be made immediately available to the chosen Capstone team. It is anticipated that the opening meeting with our DFID contact, Dr. Alexander Hamilton, will take place in mid-November 2013 when he will be in London. By this stage it would be useful if the Capstone team had become thoroughly familiar with the data, undertaken some preliminary analyses, and had a developed plan for completing the project.
- 8. A "course correction" meeting with Dr. Hamilton will probably then take place in January 2014 by Skype or phone.
- 9. There will be a final presentation of the Capstone report to DFID in late March or early April, subject to Dr. Hamilton's schedule.
- 10. The LSE supervisors will be Professor Patrick Dunleavy, who will handle client liaison and governance and policy aspects, and lead on the report timings and argument; and Dr. Konstantinos Matakos, who will handle issues related to multivariate analysis, statistics, and data.
- 11. The contact person at DFID is Dr. Alexander Hamilton, who is the Statistics Advisor on the DFID Policy Team, Sudan based in Khartoum. Alex is an MPA alumnus, from one of our pioneering year groups, who moved to LSE to complete a political economy D.Phil at Oxford University. He was then a consultant at the World Bank, before joining DFID.

2 Appendix to Chapter 2

Name	Institution and position	Focus of the interview	Date and type of interview
Samer Abdelnour	Assistant Professor at Rotterdam University; Expert for the Sudan	Aid agencies in the Sudan and Darfur	07.12.2014 / semi- structured qualitative interview at the LSE
Tim Niblock	Professor for political science at the University of Exeter	Public Services in the Sudan: horizontal inequalities	03.03.2014 / semi- structured qualitative interview at the LSE
Mark Duffield	Former Director of the Global Insecurity Centre, Fellow of the Rift Valley Institute, expert on emergencies in the Sudan	Emergencies in the Sudan; perceptions	03.03.2014 / semi- structured qualitative interview via phone
Richard Cockett	Former Africa editor for The Economist	Public Services in the Sudan: horizontal inequalities	04.03.2014 / semi- structured qualitative interview via Skype

2.1 Qualitative expert interviews carried out for triangulation of data

2.2 Decentralisation in Sudan

Both the amendment of Sudan's Permanent Constitution of 1974 and the passage of the Regional Government Act in 1980 signalled a transition towards a devolved and decentralised governance structure in the Sudan. The Regional Government Act outlined the new responsibilities of regional governments for the Northern, Eastern, Central, Kordofan and Darfur regions, with Khartoum having its own administration. The regional governments were entrusted with responsibilities for the planning and administration of local public services;¹ this was to allow for the size and diversity of Sudan, to encourage government to be more directly representative of the peoples' interests and to allow the national government to focus more narrowly on the national agenda. Though the Sudan has a long history of various forms of decentralisation, it is evident that the system was often manipulated, allowing the 'use of grants' by the national government in authoritarian ways'² and despite the devolution of powers to regional governments, it is contested as to whether the Islamist federalist structure³ represents a genuine federal system, particularly in light of the reality of the responsibilities and rights given to regional and state governments⁴. Significant challenges also abound in terms of budgeting, with Federal reserve transfers to the state-level reducing and with the earmarked financing for social services, including health and education, projected to have declined to 0.9% in 2012.⁵

¹ Salih, et al., 1995.

² Fegley, 2011.

³ This was officially established through the Revolutionary Command Council's Fourth Constitutional Decree in 1991 (Salih, et. al, 1995).

⁴ El-Gaili, 2004.

⁵ AfDB et al., 2012.



2.3 Cross-country comparison of public service spending



Source: World Bank, 2012.

2.4 Female Genital Cutting (FGC) analysis of DFID survey data

Currently, the main focus of social development-related DFID policies in Sudan is on female genital cutting (FGC). Consequently, the following sub-chapter concentrates on the analysis of FGC-related data in the survey, in which respondents were asked if they would like FGC to be stopped or not (and, if they answered no, respondents were asked to state their reason). Across Sudan, 72% of respondents stated that they would want FGC practices to stop. However, there is significant variation in answers across states (see Figure 47 below).







Figure 3 – Opinion on FGC in Sudan, Women only. Source: Created by the authors based on data from DFID Sudan survey 2013.

In White Nile, Red Sea and Sennar, nearly 50% of respondents answered that they would like FGC to be continued, whereas more than 80% of respondents in Kassala, Khartoum, Northern, Al-Gezira and North Kordofan want the practice to stop. Among those who would like FGC to continue, the reason mentioned most is the importance of tradition (just under 50%), whereas only 25% refer to Islam as an argument for FGC.



Figure 4 – Reasons mentioned why FGC should continue. Source: Created by the authors based on data from DFID Sudan survey 2013.

In a preliminary analysis based on correlations of response variables and simple regression analyses, the main factors determining the respondents' opinion on circumcision, aside from the geographic location, are marital status (being married is positively correlated with the call for a continuation of circumcision), religiousness (being more religious is associated with a higher probability of stating that FGC shall be continued) and political interest (higher political interest is associated with a higher probability of stating that FGC shall be continued) and political interest (higher political interest is associated with a higher probability of stating FGC should be stopped), whereas no significant impact of gender on FGC opinions can be observed.

According to a DFID publication on FGC from February 2013 "89% of [Sudanese] women and girls aged 15-49 have undergone some form of FGC" (DFID Sudan, 2013). The outlined findings from the 2013 DFID survey partly contradict previous findings. For instance, a recent Sudan Household Health Survey found that Kassala was among those states with the highest support of FGC (68% of women were in favour of it, see Ahmed/Al Hebshi/Nylund, 2009), whereas in the survey at hand, Kassala has the highest disapproval rate of all the Sudanese states (see Figure 47). Possible reasons for the differences in findings include methodological issues related to data collection (see sub-chapter 4.1), such as interviewer bias and social expectancy.



2.5 Governmental structure and public resource flow for health and WAS

Figure 5 – Health Governance Structure in Sudan.

Source: Authors of this report using World Bank 2011, Ministry of Health 2007

Appendices



Figure 6 - WAS governance structure in the Sudan.

Source: Authors of this report using DFID 2013b



2.6 WAS access in Sudan: a comparison across Sub-Saharan Africa



Source: DFID 2013b.

2.7 Cluster Analysis Details (Figure 18)

In sub-chapters 2.4, we investigated the relationship between the "overall" perception of service quality and "overall" trust held by Sudanese people based on the DFID Sudan 2013 survey data, where we saw a positive relationship between these two dimensions. Below we briefly explain the technical aspects to show how we obtained the results of the cluster analysis.

The survey asked the respondents to indicate how they rate the quality of the following 11 services:

service1 "Public schools"service2 "Public hospitals"service3 "Piped water"service4 "Sanitation facilities"service5 "Electricity"service6 "Court system"service7 "Police"service8 "Local committees"service9 "Traditional/religious courts"service10 "Public administration/government (state)"service11 "Public administration/government (federal)"

The responses were coded in a 5-point Likert scale: 1= "extremely poor quality", 2= "poor quality", 3= "suitable", 4= "good quality," and 5= "excellent quality" in addition to the two options: 6= "don't know" and 7= "refuse to answer". We defined the "overall" perception of quality score by taking the simple arithmetic mean of 11 items. The resulting variable had mean of 2.4 with standard deviation of 0.79 (n = 1,739).

The survey also asked the respondents to indicate how much trust they have in each of the following 15 groups, institutions or persons:

trust2 "Judiciary"
trust4 "Armed forces"
trust6 "Local government"
trust8 "Federal Government"

trust9 "Police"	trust10 "Journalists"
trust11 "Private companies"	trust12 "My local tribal chief"
trust13 "My local hospital"	trust14 "My local school"
trust15 "My electricity company"	

The responses were coded in a 4-point Likert scale: 1= a lot", 2= "some", 3= "a little" and 4= "no trust," in addition to the two options: 6= "don't know" and 7= "refuse to answer". To obtain better intuition (that is, more "positive" answers to have higher scores), we reversed the score as 4= "a lot", 3= "some", 2= "a little" and 1= "no trust" before conducting any analyses. Then we defined the "overall" trust score by again taking the simple arithmetic mean of 15 items. The resulting variable had mean of 2.6 with standard deviation of 0.65 (n = 1,542).

In order to identify some groups in the population which are more or less homogeneous when using the measures of the above-defined overall perception of service quality and overall trust scores, we relied on a statistical technique called Cluster Analysis. This technique allows the partitioning of an original population into subsets (clusters), so that the data in each cluster share some common trait, which are the overall perception of service quality and the overall level of trust in our case at hand. In particular, we employed the so-called K-means clustering method by specifying the number of clusters to be three for simplicity. The three clusters are characterised by the overall perception of service quality and the overall trust scores as below.

	Cluster 1 (<i>n</i> =313)	Cluster 2 (<i>n</i> =478)	Cluster 3 (<i>n</i> =517)	Total (<i>n</i> =1,308)	ANOVA
	Mean S.D.	Mean S.D.	Mean S.D.	Mean S.D.	
Overall perception	1.76 (.58)	2.06 (.47)	3.19 (.47)	2.39 (.79)	<i>p</i> < 0.0001
Overall trust	1.76 (.43)	2.77 (.37)	2.89 (.56)	2.56 (.66)	<i>p</i> < 0.0001

As discussed in sub-chapter 2.4, Cluster 1 (n = 313) was characterised by low perception of quality and low trust; Cluster 2 (n = 478) had low perception of quality and high trust scores; and Cluster 3 (n = 517) high perception of quality and high trust. Analyses of variance (ANOVAs) indicated significant differences between clusters for both the overall perception of service quality and overall trust scores, and post hoc tests (Bonferroni multiple-comparison) showed each cluster to be significantly different from each other cluster on both the overall perception of service quality and overall trust.



2.8 Additional Chapter 2 Graphs

Figure 8 - "Perception-to-Provision Ratio (PPR)" Index for Public School Service. (Source: Created by the authors based on data from DFID Sudan survey 2013.)





(Source: Created by the authors based on data from DFID Sudan survey 2013.)



Figure 10 - Overall perception of Government & Public Service Quality, by state.

Source: Created by the authors based on data from DFID Sudan survey 2013.





Source: Created by the authors based on data from DFID Sudan survey 2013.

3 Appendix to Chapter 3

3.1 Details of regression results at the individual level

In sub-chapters 3.4, we developed regression models at the individual level and analysed the results. However, some of the regression coefficients including those of state dummy variables were omitted from display to keep the tables concise. Below we present the complete regression tables from STATA outputs for each service sector for the comprehensiveness. Note that, for the state dummies, the base was chosen to be Khartoum.

(A) Education

Regression estimates for the determinants of perception of quality in public schools, at the individual level. (1) and (2) Ordered Logit Model, (3) Mediation Model. This table represents the comprehensive version of the model in Chapter 2.

	(1) Perception of quality in public schools	(2) Perception of quality in public schools	(3) Perception of quality in public schools
female	-0.0349 (-0.34)	0.0178 (0.14)	0.0311 (0.27)
age	-0.00884 (-1.94)	-0.00386 (-0.67)	-0.00148 (-0.28)
income	0.127 (1.78)	0.179* (2.04)	0.198* (2.49)
married	-0.0387 (-0.35)	-0.0368 (-0.26)	0.0116 (0.09)
education	-0.123*** (-4.05)	-0.0555 (-1.45)	-0.0416 (-1.19)
urban	0.0894 (0.95)	0.111 (0.95)	0.0798 (0.68)
workstatus	-0.0473 (-0.45)	0.0271	-0.0259 (-0.21)
Al Gedarif	-0.312 (-1.82)	-0.743*** (-3.73)	-0.708** (-2.91)
Al Gezira	0.794*** (4.28)	0.448	0.455
Blue Nile	0.112	-0.0222	0.0181
Kassala	0.569***	0.137	0.138
Khartoum	0	0	0
North Darfur	-0.142 (-0.57)	-0.195	-0.0634
North Kordofan	0.493**	-0.0338	-0.0100
Northern	0.967***	0.139	0.152
Red Sea	0.387	0.0542	0.127
River Nile	0.732*	0.0262	0.0551

	(2.11)	(0.06)	(0.14)
Sinnar	1.017*** (4.72)	0.575* (2.41)	0.566* (2.29)
South Darfur	-1.002*** (-4.78)	-1.257*** (-4.33)	-1.174*** (-4.15)
South Kordofan	-0.946*** (-4.60)	-1.134*** (-4.57)	-1.064*** (-3.89)
West Darfur	0.293 (1.25)	-0.0446 (-0.16)	0.0354 (0.13)
White Nile	0.877*** (3.84)	0.396 (1.55)	0.374 (1.51)
trustgov		0.0169*** (8.60)	0.0185*** (10.47)
trustpub		0.00799*** (4.14)	0.00812*** (4.92)
cut1 _cons	-1.553*** (-5.03)	0.136	
cut2	()		
_cons	-0.150 (-0.49)	1.553*** (3.65)	
cut3	1 ((7***	0 400***	
_cons	(5.30)	3.432	
cut4	(0.00)		
_cons	3.156***	4.896***	
<u> </u>	(9.31)	(10.53)	
trustgov female			2.915 (1.52)
age			-0.0649 (-0.74)
income			0.769 (0.59)
married			1.681 (0.79)
education			0.264 (0.46)
urban			3.401 (1.72)
workstatus			3.883 (1.91)
Al Gedarif			1.660 (0.39)
Al Gezira			4.733 (1.06)
Blue Nile			1.427 (0.32)
Kassala			13.08** (3.03)
Knartoum			U (.)
North Kordefer			(-2.17)
NOI UI KOFUOIAII			14.17

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	(2.62)
Northern	7.492 (1.23)
Red Sea	14.90** (2.91)
River Nile	16.19** (2.61)
Sinnar	16.34*** (3.86)
South Darfur	-2.158 (-0.47)
South Kordofan	0.375 (0.08)
West Darfur	-3.257 (-0.71)
White Nile	17.70*** (4.26)
_cons	51.79*** (8.64)
trustpub female	5.239** (2.63)
age	0.110 (1.21)
income	0.894 (0.66)
married	-0.960 (-0.43)
education	-1.699** (-2.84)
urban	-6.022** (-2.94)
workstatus	2.510 (1.19)
Al Gedarif	0.883 (0.20)
Al Gezira	-5.990 (-1.29)
Blue Nile	-0.639 (-0.14)
Kassala	-16.96*** (-3.79)
Khartoum	0 (.)
North Darfur	-2.021 (-0.29)
North Kordofan	-13.51* (-2.40)
Northern	24.33*** (3.86)
Red Sea	-2.724 (-0.51)

River Nile			-0.256
			(-0.04)
Sinnar			-9 174*
Sima			(-2.09)
South Darfur			-18.27***
			(-3.86)
South Kordofan			-3.696
			(-0.76)
West Darfur			1 410
West Dallul			(0.30)
			(0.50)
White Nile			-9.213*
			(-2.13)
cons			50 60***
_0013			(8.13)
poq2school_cut1			
_cons			0.509
			(1.33)
poq2school_cut2			1 075***
_00115			(4.73)
pog2school cut3			(1.75)
_cons			3.702***
			(9.31)
poq2school_cut4			
_cons			5.160***
			(12.37)
var(e.trustgov)			046 7***
_cons			(25.69)
var(e.trustnub)			(23.07)
cons			1020.9***
			(25.69)
Ν	2002	1312	1320

t-statistics in parentheses * p < 0.05, ** p < 0.01, *** p < 0.001

(B) Health

Regression estimates for the determinants of perception of quality in public hospitals, at the individual level. (1) and (2) Ordered Logit Model, (3) Mediation Model. This table represents the comprehensive version of the model in Chapter 2.

	(1)	(2)	(3)
	Perception of quality	Perception of quality	Perception of quality
	in public hospitals	in public hospitals	in public hospitals
			F F F
female	-0.0795	-0.140	-0.0548
	(-0.80)	(-1.12)	(-0.47)
age	-0.00764	-0.00959	-0.00488
	(-1.66)	(-1.69)	(-0.92)
income	0.104	0.138	0.113
	(1.54)	(1.66)	(1.42)
married	-0.130	0.0291	0.0684
	(-1.13)	(0.21)	(0.53)
education	-0.142***	-0.108**	-0.0841*
	(-4.51)	(-2.58)	(-2.33)
urban	0.0419	0.370**	0.288*

	(0.41)	(2.93)	(2.41)
workstatus	-0.164	-0.180	-0.163
	(-1.59)	(-1.34)	(-1.31)
Al Gedarif	-0.264	-0.762**	-0.699**
	(-1.27)	(-2.96)	(-2.66)
Al Gezira	1.302***	1.146***	1.128***
	(6.97)	(4.63)	(4.28)
Blue Nile	0.489*	0.127	0.171
	(2.14)	(0.44)	(0.62)
Kassala	1.048***	0.755***	0.791**
	(5.91)	(3.31)	(3.15)
Khartoum	0	0	0
	(.)	(.)	(.)
North Darfur	0.969***	0.598	0.623
	(3.92)	(1.30)	(1.51)
North Kordofan	0.0417	-0.524	-0.502
	(0.21)	(-1.78)	(-1.55)
Northern	1.452***	0.263	0.360
	(6.66)	(0.69)	(1.00)
Red Sea	1.070***	0.531	0.613*
	(4.56)	(1.92)	(2.06)
River Nile	0.612*	-0.00712	0.0167
	(1.98)	(-0.02)	(0.04)
Sinnar	1.449***	1.022***	1.012***
	(6.93)	(4.13)	(3.99)
South Darfur	-0.656**	-0.420	-0.422
	(-2.99)	(-1.52)	(-1.49)
South Kordofan	-0.508*	-0.809**	-0.789**
	(-2.21)	(-2.77)	(-2.71)
West Darfur	0.963***	0.522	0.553*
	(3.94)	(1.72)	(1.96)
White Nile	1.485***	1.111***	1.087***
	(6.61)	(4.15)	(4.28)
trustgov		0.0176*** (8.78)	0.0161*** (9.15)
trustpub		0.0110*** (5.70)	0.00939*** (5.69)
cut1	-1.084***	0.448	
_cons	(-3.45)	(1.05)	
cut2	0.569	2.058***	
_cons	(1.81)	(4.77)	
cut3	2.058***	3.742***	
_cons	(6.34)	(8.36)	
cut4	3.607***	5.382***	
_cons	(10.47)	(11.57)	
trustgov female			2.915 (1.52)
age			-0.0649 (-0.74)
income			0.769

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	(0.59)
married	1.681 (0.79)
education	0.264 (0.46)
urban	3.401 (1.72)
workstatus	3.883 (1.91)
Al Gedarif	1.660 (0.39)
Al Gezira	4.733 (1.06)
Blue Nile	1.427 (0.32)
Kassala	13.08** (3.03)
Khartoum	0 (.)
North Darfur	-14.59* (-2.17)
North Kordofan	14.17** (2.62)
Northern	7.492 (1.23)
Red Sea	14.90** (2.91)
River Nile	16.19** (2.61)
Sinnar	16.34*** (3.86)
South Darfur	-2.158 (-0.47)
South Kordofan	0.375 (0.08)
West Darfur	-3.257 (-0.71)
White Nile	17.70*** (4.26)
_cons	51.79*** (8.64)
trustpub female	5.239** (2.63)
age	0.110 (1.21)
income	0.894 (0.66)
married	-0.960 (-0.43)
education	-1.699** (-2.84)

urban	-6.022** (-2.94)
workstatus	2.510 (1.19)
Al Gedarif	0.883 (0.20)
Al Gezira	-5.990 (-1.29)
Blue Nile	-0.639 (-0.14)
Kassala	-16.96*** (-3.79)
Khartoum	0 (.)
North Darfur	-2.021 (-0.29)
North Kordofan	-13.51* (-2.40)
Northern	24.33*** (3.86)
Red Sea	-2.724 (-0.51)
River Nile	-0.256 (-0.04)
Sinnar	-9.174* (-2.09)
South Darfur	-18.27*** (-3.86)
South Kordofan	-3.696 (-0.76)
West Darfur	1.419 (0.30)
White Nile	-9.213* (-2.13)
_cons	50.60*** (8.13)
poq2hospital_cut1 _cons	0.584 (1.50)
poq2hospital_cut2 _cons	2.153*** (5.46)
poq2hospital_cut3 _cons	3.820*** (9.46)
poq2hospital_cut4 _cons	5.402*** (12.54)
var(e.trustgov) _cons	946.7*** (25.69)
var(e.trustpub) _cons	1020.9*** (25.69)
N 1998 1314	1320

* *p* < 0.05, ** *p* < 0.01, *** *p* < 0.001

(C) Water & Sanitation

Regression estimates for the determinants of perception of quality in water and sanitation services, at the individual level. (1) and (2) Ordered Logit Model, (3) Mediation Model. This table represents the comprehensive version of the model in Chapter 2.

	(1)	(2)	(3)
	Perception of quality	Perception of quality	Perception of quality
	in WAS service	in WAS service	in WAS service
female	0.0399	-0.00255	0.100
	(0.40)	(-0.02)	(0.85)
age	-0.00663	-0.00444	-0.00508
	(-1.41)	(-0.73)	(-0.93)
income	0.160*	0.193*	0.133
	(2.30)	(2.31)	(1.67)
married	-0.208	-0.222	-0.190
	(-1.77)	(-1.54)	(-1.44)
education	-0.0588	-0.0230	0.0230
	(-1.84)	(-0.57)	(0.64)
urban	-0.294**	-0.135	-0.128
	(-2.87)	(-1.09)	(-1.07)
workstatus	-0.134	-0.168	-0.139
	(-1.27)	(-1.26)	(-1.11)
Al Gedarif	0.0961	-0.317	-0.317
	(0.58)	(-1.44)	(-1.29)
Al Gezira	0.631***	0.170	0.126
	(3.48)	(0.71)	(0.49)
Blue Nile	0.882***	0.472	0.526*
	(3.94)	(1.78)	(1.99)
Kassala	0.876***	0.401	0.390
	(5.82)	(1.87)	(1.60)
Khartoum	0	0	0
	(.)	(.)	(.)
North Darfur	0.942***	-0.0434	-0.00765
	(3.59)	(-0.09)	(-0.02)
North Kordofan	-0.210	-0.368	-0.399
	(-1.05)	(-1.27)	(-1.27)
Northern	1.713***	0.804*	0.886*
	(7.44)	(2.48)	(2.51)
Red Sea	-0.366	-0.951**	-0.829**
	(-1.34)	(-2.80)	(-2.62)
River Nile	0.648	0.0525	0.0677
	(1.90)	(0.12)	(0.17)
Sinnar	-0.0517	-0.477	-0.525*
	(-0.22)	(-1.76)	(-2.05)
South Darfur	-0.990***	-1.003***	-1.046***
	(-4.32)	(-3.34)	(-3.62)
South Kordofan	-0.472*	-0.964***	-0.952***
	(-2.13)	(-3.40)	(-3.33)
West Darfur	-1.157***	-1.648***	-1.590***

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	(-4.31)	(-5.13)	(-5.25)
White Nile	-0.103 (-0.45)	-0.579* (-2.07)	-0.611* (-2.40)
trustgov		0.0117*** (6.10)	0.0127*** (7.25)
trustpub		0.00840*** (4.51)	0.00665*** (3.98)
cut1			
_cons	-0.814** (-2 72)	0.178	
cut2	(= =)		
_cons	0.585*	1.502***	
cut3	(1.90)	(3.72)	
_cons	1.968***	2.863***	
	(6.41)	(6.85)	
cut4	3 573***	4 858***	
_0013	(10.63)	(10.24)	
trustgov	x <i>i</i>		
female			2.915
			(1.52)
age			-0.0649
-			(-0.74)
·			0.7(0
Income			0.769
			(0.07)
married			1.681
			(0.79)
education			0 264
culculon			(0.46)
urban			3.401
			(1.72)
workstatus			3.883
			(1.91)
			4.660
Al Gedarif			1.660
			(0.39)
Al Gezira			4.733
			(1.06)
Rhuo Nilo			1 427
Dide Mile			(0.32)
Kassala			13.08**
			(3.03)
Khartoum			0
			(.)
North Darfur			14 50*
Norui Dariu			(-2.17)
			()
North Kordofan			14.17**
			(2.62)
Northern			7.492
			(1.23)
DedCar			14.00**
кей зеа			14.90 (2.91)
			(
River Nile			16.19**
			(2.61)
Sinnar			16.34***

Appendices

	(3.86)
South Darfur	-2.158 (-0.47)
South Kordofan	0.375 (0.08)
West Darfur	-3.257 (-0.71)
White Nile	17.70*** (4.26)
_cons	51.79*** (8.64)
trustpub	
female	5.239** (2.63)
age	0.110 (1.21)
income	0.894 (0.66)
married	-0.960 (-0.43)
education	-1.699** (-2.84)
urban	-6.022** (-2.94)
workstatus	2.510 (1.19)
Al Gedarif	0.883 (0.20)
Al Gezira	-5.990 (-1.29)
Blue Nile	-0.639 (-0.14)
Kassala	-16.96*** (-3.79)
Khartoum	0 (.)
North Darfur	-2.021 (-0.29)
North Kordofan	-13.51* (-2.40)
Northern	24.33*** (3.86)
Red Sea	-2.724 (-0.51)
River Nile	-0.256 (-0.04)
Sinnar	-9.174* (-2.09)
South Darfur	-18.27*** (-3.86)
South Kordofan	-3.696 (-0.76)

West Darfur			1.419 (0.30)
White Nile			-9.213* (-2.13)
_cons			50.60*** (8.13)
poq2watsanit_cut1			
_cons			0.337
			(0.88)
poq2watsanit_cut2			
_cons			1.595***
			(4.14)
poq2watsanit_cut3			
_cons			2.993***
			(7.59)
poq2watsanit_cut4			
_cons			4.958***
			(11.39)
var(e.trustgov)			
_cons			946.7***
			(25.69)
var(e.trustpub)			
_cons			1020.9***
			(25.69)
Ν	1980	1305	1320

t-statistics in parentheses * p < 0.05, ** p < 0.01, *** p < 0.001

4 Appendix to Chapter 4

4.1 Construction of sampling weights

The collection of accurate and representative data is inherently challenging and the design of sampling strategies to ensure the representativeness of the sample is of major importance. Furthermore, the construction of sampling weights based on the representativeness, or lack thereof, in the survey is also subject to challenges. There are two main limitations with respect to how the weights were constructed for this report. First, the 2008 Sudan National Census, the most recent nationwide census based on which the weights were constructed, has been widely contested, particularly with respect to the population estimates for the Darfur region.⁶ Second, these weights do not account for the complex multi-stage clustering strategy used to collect this data. In order to address the sampling strategy accurately we needed details of the finite population corrections, such as, number of localities in each state, villages in each locality and households in each village in Sudan. We could not access this information from the SPSC, which had this information only for limited states.

⁶ Sudan Tribune, 2009.

5 Interim Report Excerpts

The Capstone group produced a 102-page interim report on DFID Sudan's request that was delivered on 7 January 2014. The interim report was developed, as the advisors in the DFID Sudan office were looking for analyses of the DFID household survey data relevant to their respective policy focuses. As the broad analysis of a number of different policy areas would have gone beyond the scope of the final report at hand, the group decided to write two reports. The interim report served as a base for some of the parts of the final report. In the following, excerpts from the interim report are presented. However, it has to be noted that for the quantitative analysis in the interim report we made use of weights that differ from those used in the final report (the polling company initially provided us with incorrect weights that we corrected in the course of the Capstone project). Quantitative analysis results from below are thus not comparable to results in the report above.

DFID Sudan Capstone Interim Report - Excerpts

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(....)

Executive Summary

This report is an interim report as a part of the LSE MPA Capstone project for DFID Sudan. This report aims to provide a preliminary analysis of DFID Sudan's 2013 household survey data using descriptive statistics, data visualisations, and regression analysis. It also aims to detail, in part, statistical modelling techniques, including regression analysis, to be used for further analysis. This additional analysis should allow us to infer potential policy implications based on a quantitative, evidence-based approach. In addition to providing preliminary analysis, this report seeks to receive feedback from the DFID Sudan team to inform the structure and content of the Capstone final report. Results from a preliminary analysis are organised in the report by advisory role. These findings are outlined in the section below:

Governance and Rule of Law

The governance and rule of law section focuses on perceptions of the police.

- In all states, people consider family the first place to seek help for a dispute resolution; there was large variation across the states as to how they rate other options such as local government, local tribe leader, and local police commander
- There seems to be a high correlation between the extent to which people feel secure living in their home and the extent they feel their local police are helpful; this implies that peoples' perceptions of their home security is closely linked to, or potentially even formed by, their perception of police performance in their local area
- In some states, those who seek help for dispute resolution with the local police also indicate that they find the police unhelpful. In other cases, those who find local police helpful do not consider them an appropriate agent for dispute resolution, indicating an interesting contradiction between peoples' perceptions of police and their behavioural decisions
- It seems that understanding how people's behavioural choices are made requires a deeper understanding of the context of Sudan, possibly of socio-demographical, social, historical, and/or cultural issues

Public Service Provision

The public service provision section focuses on service access and quality ratings and perceptions on the gap between Khartoum and areas outside of Khartoum.

- There often exists a variation in the average ratings of public services within states but across different services This variation could reflect several factors, for example a delineation between institutions that depend more heavily on physical infrastructure and those that do not
- Education and secular identity are particularly important explanatory variables in determining peoples' public service quality ratings. Higher education and a secular identity were found to be correlated with lower ratings of certain public services
- There was also significant variation across states in responses on the perceived gap in service access and quality between Khartoum and areas outside of Khartoum

Economy

Survey data on the economy centred on access to banking services, perceptions on subsidies, and perceptions on the direction of the economy.

- Graphical representations of access to banking suggest that access is not restricted to Khartoum and areas around Khartoum, rather, that there is a more complex picture of access to banking featuring other centres of access
- Khartoum and its southern neighbours exhibited the highest positive responses to a question on whether someone had created, or thought about creating, a business, North Darfur recorded the highest level with 56% positive responses. The Red Sea has extremely low levels of business creation at only 5%.
- In 2012, 80% of Sudanese felt that the government should subsidise basic goods and services

Humanitarian and Conflict

These questions were asked to respondents living in states affected by conflict, including North, South, and West Darfur, North and South Kordofan and consisted of questions on experiences of war, internal displacement, and receipt of humanitarian aid.

- Significant differences exist with respect to personal experiences of war; North Kordofan had the lowest direct experience of war with 36% of respondents indicating they had personally seen war. In contrast, 86% of those surveyed in North Darfur had personal experience of war in the past year, as had a similarly high percentage of respondents in South Kordofan and West Darfur
- Conflict has significant effect on levels of displacement; in North Darfur, 76% of respondents indicated that they had to leave their homes in the past year due to safety concerns. Similarly high levels of displacement were seen in South Kordofan
- Receipt of humanitarian aid largely mirrored locations where direct experience of war was high
- There is variation within regions across states as to internal displacement and experience of war; 78% of respondents in North Darfur considered themselves to be internally displaced, compared to 25% in South Darfur

Social Development

The social development section focuses on female genital cutting (FGC).

- Across Sudan 72% reported wanting the practice of FGC to cease; but there exists variation in responses across states.
- In White Nile, Red Sea, and Sennar, nearly 50% of the respondents reported wanting FGC to continue, whilst over 80% of respondents in Kassala and Khartoum wanted the practice of FGC to stop
- Of those who want the practice to continue, tradition is cited as the main motive (around 50% cited tradition)

In order to further investigate these findings and relationships between variables within the data, our Capstone team makes use of statistical modelling techniques, including regression analysis, as outlined in this report. The models presented in this report on: roles of trust in government and the perception of government services in determining future outlook, investigating the determinants of access to banking services, conflict-based model of the future of Sudan, relationships within public service quality ratings, and determinants of opinions on FGC.

These models reflect two pieces of information: first, they reflect our hypotheses, based on literature on trust and perceptions of institutions and on Sudan-specific knowledge, of the relationships that exist within the data set. Second, they reflect results we've obtained through our analysis to-date on the relationships between observable variables, as informed by preliminary multiple regression analysis. These models will form the basis of our more refined analysis for the final report, and are therefore open for comment and revision.

(...)

(...)

2 Considering the Context: the Sudan

In this chapter of the report we look to provide an overview of the context of Sudan, particularly in exploring topics relevant to the survey content. We cover some basic demographic and socioeconomic indicators and gain an understanding of the prevalent influences of the colonial legacy, as well as considering the economy, public services, governance, and international relations. Finally, we provide a brief overview of some of the key problems of data collection in conflict-affected countries such as Sudan.

2.1 Introduction

The Republic of Sudan has only existed in its current state since 2011, following the independence of South Sudan. Prior to this, as the largest country in Africa, the Sudan had a long and complex history in its borders, which were originally determined by Muhammed Ali of Egypt in the nineteenth century when his armies asserted their control over various territories and amalgamated them into one. The huge swathes of land identified as Sudan are as diverse in landscape as they are in people, with deserts, swamps, forests and savannahs, as well as 'Arabs and non-Arabs, Muslims and non-Muslims, city dwellers and nomads and sedentary farmers' (Ryle & Willis, 2011).

Politically, Sudan has been plagued by instability with a succession of civil wars, war in the Darfur region, and, more recently, conflict in South Kordofan and the Blue Nile The secession of the South in 2011 has further exasperated much of this instability, particularly around the borders. As a result, the country has suffered economically and the loss of oil revenue, a result of the South's independence, has and will further exacerbate these problems. Marginalisation of peripheral regions of the country has enhanced the divisions within Sudan As such, though the country is classified by the World Bank as a lower middle-income country (World Bank, 2012), Sudan paradoxically falls 171st out of 186 countries in the 2013 Human Development Index (HDI). This is largely a result of the concentration of both wealth and power in Khartoum and the North and the neglect of the Southern regions within Sudan and those on the periphery.

2.2 Who are the Sudanese?

A significant proportion of our analysis will look to understand the differences in perceptions across various sub-sections of society and as such it is important to have a clear understanding of the demographic and socioeconomic composition of Sudan. While some of this information will come directly

from those surveyed, it is useful to have an overarching view, while still recognising any discrepancies which might exist in the Sudan census data (see sub-chapter 4.1) or data collected by other organisations.

The most recent UN statistics describe a population of forty-five million in 2011, with population growth of 2.4% per annum. Sudan's population is extremely young, with approximately 40% of the population between the ages of 0-14 based on 2012 estimates. In terms of urbanisation, estimates indicate that in 2005 approximately one in three of the population of Sudan were living in towns, representing a significant trend in the number of people moving from rural areas to towns and cities. Linked to this, the Sudanese population has experienced high levels of displacement as a result of conflict, with some estimates suggesting that by 2005 one in six of the population in Sudan were classified as internally displaced (Assal, 2011).



Figure 12 - Percentage of children completing primary school. Source: BBC (2013)

Migration has made it more difficult for displaced persons to establish and sustain long-term livelihoods. Education and literacy vary significantly by both state and rural and urban status, with the 2008 nationwide census indicating that 72.9% of children, compared to only 46.8% in rural areas, were attending basic school. There were also wider gender differences between rural and urban areas (Sayed & Elgaali, 2009). Figure 1 shows the percentage of children who complete primary school by state, based on the 2006 Sudan household health survey. This figure emphasises regional disparities, indicating that the completion rates in the Northern regions are significantly higher than those in the rest of Sudan. The majority of the population, around 80%, secure their livelihood in some form of agriculture (CIA, 1998).

The different identities assumed by Sudanese citizens have tended to adapt and vary over time; these identities have also tended to have high political significance. In particular, the differentiation between Arab and non-Arab identities has been a point of interest and commentators often make direct links between this and marginalisation and conflict. The majority of inhabitants living in the central areas of Northern Sudan, around the Nile valley, identify themselves as belonging to one of many Arab groups. Conversely, many in the far North, the East and in the Southern regions would identify themselves as non-

Arab, claiming alternative identities. Figure 2 shows the distribution of ethnic groups throughout Sudan and South Sudan. This emphasises the relative prominence of the Arab ethnic group throughout Sudan, with 48% of the population defining themselves as Arab. In considering whether these identities are linked to other socioeconomic indicators it is important to note that: 'ethnicity and livelihood do not map onto each other with any consistency' (Ryle, 2011). Similarly, direct linkages are not easy to make with other demographic or socioeconomic categories.





Source: South Sudan Info (2013)

2.3 A colonial legacy

The influence of the colonial legacy in Sudan has long been debated, with most agreeing that 'the Sudan has been undergoing a process of Arabization and Islamization since the invasion of Sudan by Arab tribes in Upper Egypt' (Johnson 2003). Besides the religious and cultural influences of the colonial powers, with the Egyptians in the North and the British in the South, the power structures reinforced and advanced by the colonial powers have remained an influential part of the Sudanese political structure.

The Sudan, from the perspective of colonial influence, existed from 1899 under the Anglo-Egyptian Condominium, an agreement dictating that Sudan existed as an Egyptian possession administered by the British. Competition between the Egyptians and British to assert control was concentrated in the North and East of Sudan. In this respect, both nations embedded power in those they felt would best represent their interests. By imbuing the North with this concentration of power, both colonial powers enforced the subjugation of the South and the peripheries, enhancing the process of centralisation. As Egypt struggled with internal affairs during the latter half of the twentieth century, the British sought to take more control. Tellingly, 'London granted a growing role to the two largest Islamic

sects, the Khatmiyya and the Ansar...these Islamic sects gave birth to Sudan's two main political parties' (Anderson, 1999).

Despite these influences, it should be clear that consecutive Sudanese governments have done little by way of remedying these processes of centralisation: "the exploitative nature of the central state towards its rich...the coercive power of the army in economic as well as political matters, the prerogative of the leader in redistributing revenues to the peripheries, the ambiguous status of persons who are not fully part of central heritage" (Johnson, 2003). In fact, Johnson argues that these processes of marginalisation have re-emerged with force following independence.

2.4 Economy

Historically an agriculture-based economy, the Sudan experienced substantial economic growth in the 2000s as it increased production and export of oil. Its GDP (current US\$) was estimated at sixty-five billion in 2010 (World Bank, 2013). The economic implications of the secession of South Sudan in 2011 have been particularly harmful because of this earlier shift which led to a reliance on oil production and revenue. The associated reductions in infrastructural investment and fiscal expenditure have been notable.

The Sudan suffers from a situation coined the 'Dutch Disease' wherein an economy shifts towards exploitation and the export of natural resources. The increased revenue Sudan experienced, in their case from oil, caused the exchange rate to appreciate. This strengthened the Sudanese pound and decreased the competitiveness of exports from other sectors. The attraction of investment and employment into the oil industry came at the expense of the manufacturing and agricultural sectors. The oil sector is said to have accounted for 56% government revenues and 95% of exports in the last decade, but 75% of this oil was supplied by South Sudan (Manson, 2012). South Sudan shut down oil production in 2012 over a failure to reach agreement on oil transport fees with Khartoum, pushing the economy into crisis. Despite over five year's notice of the secession, officials in Khartoum admit the country failed to prepare for the split.

The Sudanese government has until recently largely subsidised a plethora of goods and services, however, pressure from international agencies has led the government to cut many of these subsidies, despite public discontent. As of September 2013 Sudan's government announced plans to increase the cost of gasoline and public transportation, triggering a wave of unrest across the country. The cost of gas is expected to increase from eight to fourteen pounds while the cost of public transport will rise 26% (El Wardany, 2013).

In addition to restricting certain imports and reducing state subsidies of commodities like sugar and fuel, the government of Sudan has, until recently, been printing money in order to buy gold at an inflated black market rate (Manson, 2012), all in an attempt to keep the exchange rate artificially high. This has applied inflationary pressure, which has resulted in a significant deterioration in the fiscal balance (in 2012 the IMF estimated a \$2.4 billion gap in public finances (Manson, 2012)) and has also prevented Sudanese exports from becoming more competitive.

The impact of this economic shock is felt by the most vulnerable. The Consumer Price Index (CPI) reached 43% in January 2013, three times the secession rate (World Bank, 2013). This has had a clear impact on the purchasing power of the poorest with 'the biggest street protests in 23 years' taking place throughout the country (Manson, 2012).

There is a significant urban/rural dichotomy in poverty levels within the Sudan. The National Baseline Household Survey of 2009 estimates that the average rate of poverty incidence is 46.5% with a rural/urban split of 58%/26%. Poverty also varies widely across states, from 26% in Khartoum to over 60% in North Darfur, Kordofan and Red Sea, according to World Bank estimates.

2.5 Conflict

During the last half century, Sudan has experienced two civil wars, war in Darfur and, more recently, conflict in South Kordofan and the Blue Nile states. Each has had its own detrimental effects on the country's unity, economy and social structures.

Both civil wars developed due to demands from the South for enhanced levels of autonomy, with the first ending in the Addis Ababa Agreement in 1972, in which the Government of Sudan (GOS) and the

Southern Sudan Liberation Movement (SSLM) agreed for the Southern region of Sudan to be granted significant regional autonomy. The civil war was reignited when, in 1983, President Jaafar Nimieri introduced Sharia law and reneged on the agreement of 1972, which was supposed to allow for a referendum in Abeyi. The end of the second civil war was a brief possibility at the start of 1989, until Omar Al-Bashir overthrew the Sudanese government in June of that year and repudiated the peace agreement that had been formulated. After this, various attempts were made to form new agreements but none were truly realised until the Comprehensive Peace Agreement was signed in 2005 (Yongo-Bure, 2009).

Darfur has been in a state of humanitarian emergency since 2003. The conflict arose following accusations against the Sudanese government in Khartoum of marginalisation of the population in Darfur, particularly the non-Arab population. The causes of the Darfur conflict have been extensively debated, and though ethnic differences have clearly played a role in advancing the region's isolation from the centre it would be problematic to describe the conflict as one dictated by ethnic tensions. More accurately, Khalid describes the two most prominent causes of the war as: 'first, hegemony by an omnipotent and omniscient Khartoum-based central government over the rest of Sudan; and second, the perpetuation of the economic development paradigm established by British rulers to serve their colonial interests' (2009).

The atrocities committed in Darfur by the central government in Khartoum have resulted in the indictment of President Omar Al-Bashir by the International Criminal Court (ICC) for genocide. However, this classification of violence and conflict is debated by some (Mamdani, 2009). Regardless, it is clear that the conflict has severely affected the lives of those living in the region. UNICEF estimates currently indicate that between 200,000-300,000 people have died since the conflict began in 2004, with over 4.7 million people directly affected by the conflict out of a population of approximately 6.2 million (UNICEF, 2008).

More recently, renewed conflict has also affected South Kordofan and the Blue Nile, beginning in each state in June and September 2011 respectively. The war in these areas is propagated by the Sudanese Armed Forces (SAF), on behalf of the government in Khartoum, and the rebel Sudan Revolutionary Front (SRF). The latter consist of a number of Darfur rebel movements and the Sudan People Liberation Movement North (SPLA-N). The conflict is a result of demands for self-determination within the two regions, demands which were supposed to be resolved before the secession of the South in 2011. The SPLA-N was intended for political integration at the same time but due to the prevalence of their armed forces the government in Khartoum refused. Following this, the SRF was formed and continues to fight for more representation and resources for both South Kordofan and Blue Nile. As a report by Crisis Group indicates (2013), these states have 'become a major battleground for the ideological competition between two opposed models: Khartoum's attempts at unifying and centralising the country with a dominant Arab-Islamic identity...versus the rebel SPLM/A's and now SRF's agenda for a more inclusive and devolved Sudan'.

2.6 Governance in the Sudan

Power in the Sudan has been devolving to lower levels of authority since the colonial administration began in 1922. The aim was to create localised forms of native administration to accommodate the multitude of tribally based communities, thus increasing the accountability mechanisms of decision making. Moreover, prior to the secession of the South. Sudan was the largest country in Africa. thus weak communication linkages were also deemed to play a role in the process of decentralisation. In 1937, a local government system was adopted by establishing municipalities and local councils. Then, in 1943, the country was divided into eight provinces, each governed by a commissioner, though the strong centralised authority remained virtually intact. In 1951, the Local Government's Act was enacted whereby the country was divided into urban and rural councils with considerable powers delegated to them under the supervision of the provincial commissioners that were established in 1943. However, despite a decentralised state, the central authority retained its dominance over all major sources of power, such as financial decision-making and budgetary controls, and delegated only limited powers to local administrations. There have been three pronounced decentralisation schemes since 1971, which, although focused on devolving to the lowest strata's of the local hierarchy, failed to dissipate financial dependence on the centre and have thus been viewed as largely ineffective. Al-Booni termed Sudan's experience of decentralisation as characterised by "delegation of authority and not devolution of power" (Hamid, 2002). In 1995 however, a measure of financial power was devolved to the states, marking a clear shift towards the federal system.

Sudan currently operates through a federal system, crystalised at the inauguration of chief of state President Umar Hassan Ahmad al-Bashir in October 1993, who was then re-elected in 2010 with 68% of the vote; neither election was without controversy. The 1991 Decree, which is the cornerstone of the current governance system, was pivotal in determining the current federal state system which is composed of twenty-six states, one hundred and twenty provinces and six hundred and thirty-four localities (Hamid, 2002).

The current federal system can be decomposed as follows. each state is governed by a *wali* who is elected from a list of four nominees proposed by the president in consultation with elites and community leaders of the state. The province is headed by a *muhafiz*, directly appointed by the president and who reports to the *wali*. The *wali* is the main power base at the sub-national level whereas the functions of the *muhafiz* are limited to political, supervisory, coordinating and security-oriented roles. The *muhafiz* has no official budget other than seed money allocated by the *wilaya* government. Nonetheless the *muhafiz* disposes of substantial funds collected as charges from residents and businesses, these charges are based on local decrees suggested by the *muhafiz*. The *mahaliya* is the main power at the locality level and their funding sources include property taxes, sales taxes and 40% of locally-generated income taxes, amongst others.

The bicameral National Legislature consisted of a Council of States and a National Assembly. Prior to the secession of the South, the National Assembly was constituted of 450 seats: 60% from geographic constituencies, 25% from a women's list, and 15% from party lists. Members serve six-year terms, the majority of the seats (323) are held by the President's National Congress Party (NCP), followed by the Sudan's People Liberation movement (SPLM) with 99 seats(CIA, 2013). Since secession it is unclear whether Sudan's National Assembly will remain at its reduced 354 seats or whether the previous 450 will be reconstituted.

2.7 Sudan and Social Services

Generally, there are significant perceived gaps in service provision within Sudan with wide variation at the state level. This can be seen by the prominent divergences in education, health and water and sanitation across Sudan. Nour discusses how these regional inequalities are advanced by inequality in the demand for education which is, in itself, determined by economic factors, including income and poverty levels, demographic indicators, and varying levels of urbanisation (2013). Additional links can be made with the colonial administration, which 'concentrated educational and economic development along the Nile, north and south of Khartoum' whilst 'the rest of the country was neglected' (Yongo-Bure, 2009). Furthermore, inaccurate population figures in the census data further bias the distribution of public services.

Figure 14 - Use of 'improved' water and sanitation by state.

% using 'improved' water & sanitation <5 5 - 10Red Sea 11-30 31 - 50>50 REPUBLIC Khartoun CHAD ERITREA **ETHIOPIA** SOUTH SUDAN CENTRAL AFRICAN REPUBLIC Juba 🗆 DR CONGO ource: Sudan Household Health Survey 2006

Source: BBC (2012)

An example of disparity in service provision can be seen in Figure 3, which shows the percentage of citizens using 'improved' water and sanitation in Sudan. As with the educational disparities shown in Figure 1, there are clear regional disparities in the level of sanitation. As Nour describes, 'educational, health, and development programs and projects are concentrated in the irrigated and mechanised agricultural subsectors, which are dominated by traders, retired senior military officers, and civil servants from the establishment' (2013). Exclusive development structures, prioritising services in the Northern regions and around Khartoum, appear to exist with respect to all public services; there are clear correlations between the distribution of political power in each region and the corresponding availability of social services.

2.8 International Relations

The International Criminal Court (ICC) has issued a number of warrants for the arrest of members of the Sudanese government, most prominent of which is the president Omar Hassan Ahmad Al Bashir. He is allegedly criminally responsible for five counts of crimes against humanity, two counts of war crimes and three counts of genocide. The first warrant for his arrest was issued in March 2009, the second in July 2010. The ICC also issued a warrant for the arrest of Ahmad Harun, the former minister of State for the Interior, in April 2007 and one for the minister of National Defence, Abdel Raheem Hussein, in March 2012 (ICC, 2013).

The decision of the international community to condemn the sitting president has had major repercussions on the levels of humanitarian aid received by the Sudanese population affected by conflict. In March 2009, Sudan expelled major foreign aid agencies from Darfur and the north and eastern regions of the country, agencies including Oxfam International, Médecins Sans Frontières (MSF), the International Rescue Committee (IRC) and Save the Children. This action was taken in response to the extradition request for Omar al-Bashir to answer ICC charges. The president expelled the foreign aid groups for allegedly helping the ICC build its case (Sanders, 2009). These services were said to provide medical care, water, sanitation and education programmes for circa 650,000 people in Darfur and 1.1 million in north and east Sudan (Hendricks, 2009).

The Sudan counts a number of allies throughout the international community, including Egypt, Russia, Iraq and China. However, animosity persists with a number of its neighbours, particularly with Chad which in 2005 declared a 'state of belligerency' with Sudan and accused the country of being the "common enemy of the nation" (Hancock, 2005). The US issued a comprehensive trade embargo on Sudan and blocked assets of the Sudan in 1997. In 2006 the President of the United States issued an executive order that targeted those involved in the conflict in Sudan's Darfur region, exempting certain conflict areas from the embargo and targeting sanctions against individuals and entities contributing to the conflict in the Darfur region (U.S Department of the Treasury, 2013).

2.9 The Challenge of Data in the Sudan

Accurate and representative data collection is always problematic, making the design of sampling methodologies vital in order that precise and reliable data is collected. These concerns are all the more challenging in conflict-affected areas and in countries where the government is widely described as authoritarian. As such, we are aware that data collection in the Sudan offers additional challenges and that the data should consequently be analysed with cultural sensitivity and due caution.

The most recent nationwide survey available is a census completed in 2008, though this has been widely contested, particularly with respect to the population estimates for the Southern regions of the country (Sudan Tribune, 2009). Data collected by government agencies is subject to political influence and as such should be treated prudently.

Additional challenges are posed by accessibility concerns, both with respect to infrastructural limitations and in accurately sampling the high proportion of the population who are displaced due to conflict. Similar concerns were reflected by Alexander Hamilton, the statistics advisor in DFID Sudan, who commented on these difficulties at a lecture given at the LSE in 2013 (Hamilton, 2013). Both issues pose a challenge to data collection in terms of sampling framework and in actually locating individuals to interview in specified regions. Further issues arise when collecting data in countries transitioning from the emergency phase of a conflict, since it is often difficult to calculate sample frames when villages and roads listed no longer exist.

There are particular concerns to take into account when asking questions which specifically focus on the perceptions of individuals with respect to services provided by government and political engagement, especially where respondents may feel pressured to provide responses which do not reflect their views due to societal pressures and fear of reprehension ("social expectancy"). Further consideration should also be given to the survey design, recognising skewness or bias in the results by considering that 'survey instruments with inappropriate cultural assumptions and/or poor translation can produce misleading results' (DFID, 2012).

4.2.2 People's perceptions of "big issues" in the Sudan

Figure 11 shows a list of potential responses for a question in the survey on people's opinions on the three biggest issues facing Sudan today.

Figure 15 - What are the three biggest issues facing Sudan today?

Source: Created by the authors based on data from DFID Sudan survey 2013.

-			
1	Corruption and nepotism	15	Access to health services
2	Lack of job opportunities	16	Internal conflict insurgency
3	Economy	17	Armed robbery and criminality
4	Relationship with southern Sudan.	18	The government's response to the priorities of the people
5	Violence against women.	19	The development of the agriculture sector
6	Discrimination against Women	20	Move away from dependence on oil.
7	Discrimination against people on the basis of racial and ethnic and tribal	21	Threats to Islam
8	Tribe	22	The relationship between religion and the state
9	Access to clean drinking water	23	Freedom of expression (of human rights in general)
10	Get sanitation Zalmrahid the	24	Instability in the region or province
11	Access electricity	25	Western influence
12	Access to justice	26	Economic sanctions and Alsaasah the West
13	Access to police	27	(Radicak islam) Salafi growth
14	Access to education	28	Urbanization

Figure 12 shows the percentage of people in each state choosing a particular option. For example, in the Red Sea state, 54.7% of the respondents chose 'Economy' as one of the three biggest issues. These issues and concerns will be intrinsically linked to state-level contextual analysis, as well as at a more granular level wherever possible. In this sense, we already note some interesting trends. We see nationwide trends, particularly with reference to the economy and access to jobs. These concerns are well-linked to the economic difficulties Sudan has faced in recent years and are likely to reflect the high levels of inflation which directly affect the cost of living. We see region-specific trends, with conflict-affected states having higher concerns about insurgency and discrimination based on ethnic or racial factors, both concerns particularly relevant to the lives of those in conflict-regions. We also see state-specific concerns with respect to violence against women and access to justice or clean water.

The responses to this question can act as drivers for further and more specific analysis; in observing the core concerns of Sudanese citizens we are able to consider which policy areas have the most significance and, as such, which questions included in the survey warrant more intensive analysis.

Figure 16 - Opinions on the three biggest issues facing Sudan today.

Source: Created by the authors based on data from DFID Sudan survey 2013



4.2.3 General outlook and political interest of survey respondents

For all analyses throughout this report, it would be meaningful to understand the relationship between peoples' responses to specific questions and their attitude towards the general social and political issues of the country. In the 2013 survey, a view of peoples' attitudes towards the social and political issues of Sudan have been captured by two main questions: the first considers how optimistic or pessimistic people feel about their future, and the second asks whether they believe the country is headed in the right or wrong direction. People's responses to these two questions are shown in Figure 13 and Figure 14 respectively. Figure 17 - People's opinions on how they feel about the future.



Source: Created by the authors based on data from DFID Sudan survey 2013.

Figure 18 - People's opinions on how they feel about the Sudan's current direction. Source: Created by the authors based on data from DFID Sudan survey 2013.



Although states located in south-west Sudan (West and South Darfur and South Kordofan) had relatively lower scores, all states had average scores of more than .5 from a scale set as 1=optimistic and 0=pessimistic, meaning that the majority of the respondents in each state were optimistic about their future (Figure 13).

On the other hand, we observe considerable variation with respect to how people perceive Sudan's general direction (Figure 14). As many as 78% of respondents in Kassala and 73% in Red Sea believed that the country is heading in the right direction, while only 13% in Khartoum thought so, the lowest percentage of all states. Kassala, Red Sea, and Khartoum were three of the most "optimistic" states (see Figure 12), in which more than 70% of respondents were optimistic about their future, yet there is a huge gap between the first two and Khartoum in terms of the perception about the country's general direction. It is interesting to consider what might determine these differences. In particular, it seems puzzling that though respondents in Khartoum seemed to strongly believe that Sudan was headed in the wrong direction, they were at the same time highly optimistic about their future.

One key variable that may explain this contradiction is the extent to which people are interested in political affairs in the country; even with the same level of social and economic background, people's interests, knowledge, and political intentions could make a difference to their perspective on Sudan and their lives more generally. Figure 15 indicates how much interest people have in the political affairs of Sudan.

Figure 19 - People's level of interest in political affairs in Sudan.



Source: Created by the authors based on data from DFID Sudan survey 2013.

As can be seen in the map above, all states' scores fall into the middle range: between 2="*Not interested*" and 3="*Somewhat interested*", from a scale of 1="*Not at all interested*" to 4="*Very interested*". However, a closer look reveals that, among all states, Khartoum (as well as River Nile) scored the highest level of political interest, almost reaching an average of three. This may suggest that higher levels of political interest, if we assume that this infers greater political knowledge, is associated with a higher tendency to believe the country is headed in the wrong direction. However, people in Khartoum were still optimistic about their future, in contrast to many other states, possibly because they are less attached to the nation, do not trust or rely on the nation, and potentially expect their future quality of life to be framed independently of the country's overall direction. It would be interesting to further investigate how people's attitudes and perceptions are linked to their socioeconomic and demographic status, as well as other personal characteristics we find within the data.

4.3 Data Analysis by Advisory Role

4.3.1 Governance and Rule of Law

In the 2013 survey, questions measuring people's attitudes towards the performance of the local police could be used as proxies for people's perceptions of governance. In this sub-chapter, we will mainly focus on the "local police performance" aspect of governance issues.

Figure 16 shows Sudanese people's response to the question "if you have a dispute, from whom would you first seek help for the resolution?" In all fifteen states, "family member" ranked first, while the ratings for other options, such as "local government", "local tribe leader", "village council", and "local police commander" varied widely across states.

Figure 20 - People's preference on where to seek help for a dispute resolution.

Source: Created by the authors based on data from DFID Sudan survey 2013.



Figure 17 shows the average responses to the question asking the extent to which the respondents found the local police helpful (original scales ranged from 1="not helpful" to 4="very helpful"). It can be seen that the states in Darfur and South Kordofan have relatively low scores for this indicator, meaning that, on average, they found the local police unhelpful. This could reflect the fact that these states are in conflict-affected regions that have long-standing underdevelopment of governance and security institutions.





Source: Created by the authors based on data from DFID Sudan survey 2013.

It is interesting to compare Figure 17 with the Figure 18, which shows the average responses, by state, to the question asking whether respondents feel secure living in their home (original scales ranged from 0= "not secure" to 1= "secure"). The patterns of responses (the strength of colour in each state) in these two graphs mirror each other, implying that people's perception of their own security is closely related to their perception of the local police performance.





Source: Created by the authors based on data from DFID Sudan survey 2013.

Also, it is worth noting that, in South Kordofan, as many as 23.2% of respondents chose their local police commanders as the first place where they would seek a dispute resolution, this option was the second most chosen response in South Kordofan and across all states. At the same time, respondents in South Kordofan seemed to find the police rather unhelpful (an average of 2.83 in Figure 17; the lowest average of all states) and also had low levels of personal security (an average of 0.27 in Figure 18; the lowest average of all states).

On the other hand, in the Red Sea, respondents seemed to find the police rather helpful (an average of 3.19 in Figure 17; the largest average of all states) and seemed to feel secure living in their home (an average of 0.98 in Figure 18; the largest average of all states), while the proportion of respondents who chose the local police commanders as the first people they would seek to resolve a dispute was only 4.7%, the lowest proportion in all the states.

These findings seem to suggest that the relationship between people's perception of police performance and their level of trust in local police—or more generally, people's "perception of" and their "trust in" the organisations that are responsible for governance—and their actual behavioural choices (whom to ask for help), is not simple or straightforward. Rather, it is a complex relationship that requires an understanding of the historical, socio-demographic, geographic, social, and/or cultural context of the specific area of the country. This should be considered when trying to explain or predict people's choices using regression-based approaches in later stages of our analysis.

4.3.2 Public Service Provision

Data on public service provision in Sudan centreed on eleven services: public schools, public hospitals, piped water, sanitation, electricity, courts, police, local committees, religious courts, state level public administration, and federal level public administration. Respondents were asked to report on the service quality for each of these services and to report on any perceived service gap between Khartoum and areas outside of Khartoum. In our preliminary analysis we explored these responses with respect to respondents' states, demographic characteristics, and expressed levels of optimism and trust in public institutions.

Analysis of the public service ratings by respondents' state elucidated several trends. Though there were clearly states that rated all or most public services lower or higher than other states across all services, there was notable variation in the ratings for different services for given states. As indicated in Figure 19 – Figure 21, South Kordofan and South Darfur rated the quality of most public services lower than other states. Similarly, Northern, Red Sea, and Al Gezira were atop most of the service rankings. However, across different services South Darfur rated police, local committees, and courts higher than public schools, public hospitals, piped water, sanitation, and electricity. This may demonstrate delineation between physical and non-physical institutions. On the other hand, this variation in ratings across services was not as clear for South Kordofan.

Similarly, Red Sea rated public schools and public hospitals on average above piped water and sanitation. Its inhabitants rated electricity, courts, local committees, and police even higher than it did public schools and public hospitals. Furthermore it displayed the highest averages for state and federal level public administration. It is interesting to note, furthermore, the relatively low ratings in Khartoum compared to other states. This was especially pronounced for state and federal level public administration, local committees, and religious courts.



Figure 24 – Service Quality Rating (2/3).

Source: Created by the authors based on data from DFID Sudan survey 2013.



Figure 25 – Service Quality Rating (3/3).

Source: Created by the authors based on data from DFID Sudan survey 2013.



Another trend found in the data on public service quality, is that there is significant variation in ratings across states within the same region. This is particularly pronounced between North and South Kordofan, and North and West Darfur, as indicated in the figures above. Blue Nile is another example, with its ratings significantly differing from the rest of the states in the Al-Awsat region. This variation in the areas mentioned, and decreased service quality ratings in South Kordofan and West Darfur, is likely a result of past and ongoing conflict.

Figure 26 - Service Quality Radar.

Source: Created by the authors based on data from DFID Sudan survey 2013.

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Figure 27 - Service Quality Radar.

Source: Created by the authors based on data from DFID Sudan survey 2013.



We also explored the service ratings with respect to demographic variables, including income, education, and secular identity. While all demographic characteristics have potential explanatory power for public service quality ratings, regression-informed analysis suggests that education and secular identity are particularly relevant. A basic specification regression with service quality rating of a particular service as the dependent variable and income, education, secular identity, marital status, work

status, age, gender, urban or rural location, and state as independent variables, allowed us to explore correlation between ratings and demographic characteristics (see appendix 8.2). Figure 24 illustrates the differences in ratings of public schools by income and education levels. It shows that individuals of the highest income level have, on average, higher ratings of public schools. It also shows that individuals with lower levels of education at each income level tend to rate public schools lower than those with higher levels of education at the same income level, with the lowest income level being a notable exception.

Figure 28 - Public schools ratings by income and education.

Source: Created by the authors based on data from DFID Sudan survey 2013.



Basic specification regression results found that education was significantly correlated with ratings of public schools, public hospitals, and state level public administration, with higher levels of education correlated with lower ratings. A secular identity was correlated with ratings of public schools, electricity, courts, police, local committees, religious courts, and state and federal levels of public administration, where identifying oneself as secular was associated with lower ratings. This variation in responses across secular and non-secular identities is illustrated in part by Figure 25 and Figure 26.

Figure 29 - Public service ratings by secular identity.

Source: Created by the authors based on data from DFID Sudan survey 2013.

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Figure 30 – Public service ratings and secular identity.

Source: Created by the authors based on data from DFID Sudan survey 2013.



With respect to public service accessibility, the 2013 survey includes data on the perceived gap in accessibility of public services, a question which is not present in the 2012 survey. The 2012 survey includes information on access to piped water in respondents' households and villages, a question which is not present in the 2013 survey.

Figure 31 – Access to piped water in household.

Source: Created by the authors based on data from DFID Sudan survey 2012.



Figure 32 - Access to piped water in village.

Source: Created by the authors based on data from DFID Sudan survey 2012.



Respondents living outside of Khartoum were asked to rate the level of service accessibility and quality in their state when compared to Khartoum for each of the public services. Exploration of these responses illustrates significant variation across states. For example, in South Darfur, Al Gedarif, and

North Kordofan, respondents, on average, perceived service accessibility in Khartoum to be better than in their respective states. On the other hand, in Red Sea and West Darfur respondents, on average, perceived service accessibility to be worse than in their home states. This is particularly interesting given the low service quality ratings in West Darfur for those services to which respondents had access. Figure 29 shows these results for courts and state and federal level public administration.

Figure 33 - Perceived service gap in the Sudan.



Source: Created by the authors based on data from DFID Sudan survey 2013.

However, despite the state-based variation in the responses given for the perceived gap, it should also be noted that variation in responses across different public services for a given state were found to be minimal. An analysis of the correlation between the responses for different public services indicated high correlation between responses, notable exceptions being local committees and religious courts. On the other hand, analysis of the perceived gap from the perspective of respondents residing in Khartoum showed significant variation across public services. Their responses indicated that certain public services, including public hospitals and sanitation, were thought to be much less accessible outside of Khartoum whereas others, including local committees and religious courts, were thought to be almost equally accessible outside of Khartoum. These results are illustrated in Figure 30 and Figure 31.

Figure 34 - Accessibility of services outside of Khartoum (answers by people from Khartoum).





Figure 35 - Accessibility of services outside of Khartoum (answers by people from Khartoum).





Preliminary findings from the descriptive statistics on public service provision indicate key trends across state, demographic and identity-based variables. These findings also indicate interesting nuances within the data that do not follow these trends, which will be points of further research and analysis.

4.3.3 Economy

Data collected on the Sudanese economy focuses on access to banking services within states and measures the level of entrepreneurial spirit therein. The four types of banking services discussed are access to: bank accounts, loans from banks or communities, training to support income increases and machines & tools to buy/rent. Following on from this, respondents were asked whether they have created or considered creating a business. If respondents provided a positive response to this question, they were then offered a list of eleven main constraints to choose from in describing the challenges they faced when seeking to start a business. Khartoum maintains a position of primacy in access to banking services and entrepreneurial gusto; however, pockets of dynamism emerge around Northern Sudan and South Kordofan.

Figure 32 illustrates the level of optimism about the future of the Sudanese economy. States with a more favourable economy in terms of access to banking and entrepreneurship, such as Khartoum and Northern Sudan, are the most pessimistic. Conversely, the Red Sea state and the Blue Nile state seem more optimistic.

Figure 36 - Economic Outlook for Sudan - 2013.



Source: Created by the authors based on data from DFID Sudan survey 2013.

The 2012 survey also investigated the biggest perceived challenges to economic growth in Sudan. Although the question asked respondents to list the top three biggest challenges, it was not worded in such a way as to imply a ranking. Thus, we amalgamated the responses by challenge. At 22% the biggest perceived challenge by far was that of conflict, followed closely by bad governance. Further behind we find issues of corruption and lack of access to foreign investment, both of similar importance, 15% and 14% respectively.



Figure 37 - The biggest challenges to economic growth in 2012.



Figure 34 below shows access to the four variants of banking services by state.

Figure 38 – Availability of banking services by state.





Figure 39 - Availability of banking services by state.

Source: Created by the authors based on data from DFID Sudan survey 2013.



Figure 34 and Figure 35 seem to suggest that access to banking is not purely centreed in and around Khartoum. North Darfur ranks highest in receiving training support. North, West and South Darfur rank mid-level in terms of access to bank accounts and West and South Darfur rank high on loans from

banks and communities. North Kordofan, however, has consistently low rankings on all four service categories and Red Sea is lowest in all banking services, except for bank accounts, where it ranks as the third highest. This analysis shows a more complex picture in terms of accessibility, and one which is not centred on Khartoum.

Over 40% of those with access to training support are from the lowest income bracket compared to 27% in the highest income bracket. This could suggest policy targeting to provide training to most vulnerable within states. Half of those from the highest income bracket have access to bank accounts compared to only 14% of those from the lowest income bracket. A similar picture is painted when we consider access to machinery and tools or other equipment to buy/rent.

Those more optimistic about the future of the Sudan are more likely to access loans from banks and/or local communities whereas those who are more pessimistic are more likely to access bank accounts. More educated individuals tend to access bank accounts and training to support income generation, however, it is primarily those with lower levels of education who have access to machines and tools to rent or buy.

Just over a third of those surveyed had either created or thought of creating a business. Figure 36 illustrates the responses to this question throughout Sudan by state.

Figure 40 - Map of entrepreneurial spirit across states.





Figure 36 indicates where people responded more or less positively with respect to having started a business or thought about starting a business. Khartoum and its southern neighbours seem to exhibit stronger entrepreneurial spirit; however, North Darfur records the highest average with 56% of positive responses, followed by Northern Sudan with and average of 49%. The Red Sea has low levels of business creation, with only 5% of respondents in this state having started a business or considered starting a business, followed by Al Gadarif with 18%. Thus, business creation appears not to be restricted to the capital or even one area of the periphery.

Individuals with higher levels of education were more likely to have started a business; however, sample size prevents us from analysing those with the highest educational attainments, beyond the BSc level.

Over half of those with access to a bank account either created or had thought about creating a business compared to 32% with no bank account access. A similar trend is seen across all four measures of access to banking. Those with access are significantly more likely to create a business or think about creating a business.

Simple regression analysis using the basic specification determines that you are more likely to start a business if you are a man who is married, working and educated. The higher the trust in local schools, the higher the likelihood to start a business, likewise for trust in journalists. The higher trust in local government, electricity companies and police the lower the likelihood of starting a business. This is perhaps a sign that discontent with the public sector fosters growth in private sector.

A question investigating opinions about the biggest threat to stability in Sudan retrieved a consensus that rebel movements constituted the greatest danger (64%), followed by war in other countries (23%) and criminals (14%). These issues are likely to be of significant concern since they affect stability and therefore could be affecting investment decisions.

Table 4 ranks the constraints to starting a business for all those who responded positively to having started or thought about starting a business. This list was constructed by summing, within each state, each instance where the constraint was listed within the top four constraints.

Table 4 - If yes [to starting a business], what were the biggest constraints?

Source: Created by the authors based on data from DFID Sudan survey 2013.

Constraints listed	Top 4 constraints (Nº states)
A lack of access to loans and banking services	14
Other responsibilities, such as the family and community	12
The high cost of taxes and fees I would have to pay to do business	11
I did not know enough about starting a business	7
The amount of regulations, licenses required to start a business	5
Problems with land and land ownership	4
Unable to access the things I needed	3
Could not afford the things I needed	1
The high costs of bribes, and other side payments	1
The risk of crime, theft, looting etc.	1
Time, cost or effort of getting goods to markets	0

We see that more educated people are associated with obstacles intuitively because these are the people most likely to start a business. Those in the lowest income bracket tend to cite other responsibilities such as family and community most frequently, whereas middle-income individuals tend to mention 'lack of knowledge' more frequently and those in higher income brackets cite the high cost of taxes and fees.

Lack of access to credit and banking was one of the top three constraints to starting a business across every state bar South Kordofan. If the respondent is optimistic about the future, they are less likely to have faced the first three constraints and no more likely to have faced the others

Those who live in urban areas were, on average, less likely to have had financial difficulty in starting a business. Those who received training to increase their income were more likely to have faced constraints linked to lack of knowledge, family and community responsibilities, inability to access things needed and inability to pay cost of bribes. All of which are in line with the high correlation between access to this training and low income.

Related to the second most important challenge of bad governance from the 2012 survey, respondents were also asked: "for the economy to improve I believe ...". Respondents were given two response options: "government needs to stick to austerity measures" and "government needs to keep subsidising basic goods and services". 93% of the entire sample answered this question and 80% felt that the state should subsidise basic goods and services. This statistic is in line with the large street protests against subsidy cuts which were seen during 2013 in Sudan, as discussed in section 2.4.

Figures 37, 38 and 39 show three pie charts illustrating the differences in opinions about who benefits most from price controls, segmented by income brackets. This data comes from the 2013 survey. Those from the lowest income bracket are seen as the main segment of the population to benefit from price controls, with merchants also seen as significant beneficiaries. However, a high proportion of people feel that price controls benefit no-one and that there is no practical use for them. This is a finding consistent across income brackets but felt most strongly by those in the highest bracket (37%).





Figure 42 - Price controls benefit mainly... by middle income bracket (500-1000STG). Source: Created by the authors based on data from DFID Sudan survey 2013.





Figure 43 - Price controls benefit mainly... by highest income bracket (1000+ STG). Source: Created by the authors based on data from DFID Sudan survey 2013.

Figure 40 illustrates the degree to which the population feels they can hold decision-makers to account. The literature suggests that a low level of accountability dissuades investment and business creation; however, Khartoum feels highly disenfranchised and yet has relatively high levels of investment. The periphery seems to follow theory more accurately; North Kordofan, Al Gedarif and Blue Nile had some of the lowest levels of entrepreneurship in the Sudan and are shown, in Figure 40, to feel unable to hold decision makers to account.

Figure 44 - Perceived accountability of decision makers by state.

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Source: Created by the authors based on data from DFID Sudan survey 2013.

4.3.4 Humanitarian and Conflict

Questions asked on conflict and with respect to humanitarian issues were limited to respondents living in states affected by conflict, including North, South and West Darfur, North and South Kordofan and Blue Nile. A further sub-section of questions were asked to respondents living in Darfur states.

Darfur has been in a state of humanitarian emergency since 2003. The conflict arose after accusations against the Sudanese government in Khartoum of marginalisation of the population in Darfur, particularly the non-Arab population. More recently, war has also affected South Kordofan and the Blue Nile; this conflict began in June and September 2011 in each state respectively. The war in these areas is propagated by the Sudanese Armed Forces (SAF), on behalf of the government in Khartoum, and the rebel Sudan Revolutionary Front (SRF). Additional context with respect to conflict in Sudan can be found in subchapter 2.5.

The first questions asked to respondents in conflict-affected states relate specifically to individual experiences of war and conflict. It should be noted that, due to the sensitivity inherent in some of these questions, answers may consequently be biased. Figure 41 shows the percentage of individuals who have personally seen war in the previous year. Areas of the map shown in black indicate that this question was not asked in these regions.

Figure 45 - War experience in Sudan.

Source: Created by the authors based on data from DFID Sudan survey 2013.



It is clear from the responses to this question that North Kordofan has had the least direct experience of war. This is expected since the more recent conflict has been concentrated in South Kordofan and Blue Nile. However, there is relatively little variation between other states, with a high proportion of people in each state having directly seen war, the highest proportion being in North Darfur where 86% of people asked had seen war in the past year. The average across all states for those who had seen war in the past year was just over 50%, of these, 26% were women. However, this statistic is also representative of the smaller sample size of women surveyed in the conflict-affected states.

A second question asked whether you knew of someone who had experienced war in the prior year, across all states surveyed 80% of respondents' knew of someone who had seen war in the past year, with similar variations across states as to those shown in Figure 41.

One of the most significant effects of the conflict in Darfur has been displacement, with a large number of people in war-affected regions having been forced to move in the last ten years and either defining themselves as internally displaced people (IDP) or refugees. The survey sought to obtain some understanding of movement in the past year by asking participants whether they have had to leave their homes due to concerns over safety.

Figure 46 - Displacement in Sudan.





Figure 42 shows the wide variation in the level of displacement in different states across the conflict-affected zones. It is evident that the two states with the highest proportion of people who have needed to move due to safety concerns are North Darfur and South Kordofan. Interestingly, based on those sampled, there has been relatively less displacement in South Darfur with only 17% of people needing to leave their homes due to safety concerns in this region compared to 76% in North Darfur and 58% in West Darfur.

In a preliminary analysis based on correlations of response variables and simple regression analyses using the basic regression specification, the main factors determining the respondents' likelihood of needing to move due to security concerns from conflict were linked to a number of factors. The results of this analysis suggest that individual's with lower levels of education, as well as women, those who are single, those who live in rural areas and those who do not work are more likely to have to move due to safety concerns. This analysis may play some role in allowing identification of those most vulnerable to the risk of displacement due to conflict. Historically, access to humanitarian aid has been mediated by the government in Khartoum and at various points in time this has been highly limited. What's more, gaining access to certain regions, specifically those closer to the borders and where conflict is rife, can be extremely challenging. The questionnaire determined to understand how many people were able to access some form of humanitarian aid during the past year.

Figure 47 – Reception of humanitarian aid.



Source: Created by the authors based on data from DFID Sudan survey 2013.

We might expect access to humanitarian aid to be directly linked to areas where a high proportion of the population has had direct experience of conflict in the past year or those which have experienced the highest levels of displacement. In this sense, the trend identified in Figure 43, which shows that North Darfur and South Kordofan have the highest proportion of humanitarian aid, appears appropriate. In preliminary analysis which considers the interaction between the responses to whether a person has received humanitarian aid in the past year and various socioeconomic and demographic responses we find that a person is more likely to have received humanitarian aid if they have lower levels of education or if they live in a rural area. A further question was asked about whether respondents have received food aid during the past year. In this case, North Darfur and West Darfur have the highest number of people having received food aid. In line with the question about receipt of humanitarian aid, we might expect those places that have received the highest proportion of food aid to correspondingly be those places that are the most food insecure. Figure 44 shows the levels of food insecurity by state in 2006.

Figure 48 - Food Insecurity in Sudan and South Sudan.



Source: Sudan Household Health Survey 2006.

This gives some indication as to why West Darfur, as the most food insecure state in Sudan at this time, has resultantly higher access to food aid based on the survey responses. Similarly, we see North Darfur and South Kordofan also suffering from high levels of food insecurity. In preliminary analysis of the interaction between responses, we also find that those receiving food aid are more likely to be older.

In those questions asked only to individuals living in the Darfur states, there were some significant differences in the responses. In the first question, individuals were asked to define whether they would consider themselves to be settled or internally displaced. Figure 45 shows the responses to this question by state. Here, we see that South Darfur has the largest population of people who consider themselves to be 'settled', with over 75% of the population answering in this way. Conversely, in North Darfur, over 75% of the population consider themselves to be internally displaced. This emphasises the relative levels of security and displacement between states and corresponds well to Figure 42 which looked at the responses of those who were forced to leave their home due to safety concerns.







When asked what form of work is undertaken, the majority of respondents in each state (over 85%) stated agriculture. West Darfur had the smallest number of cattle herders with only around 5% of the population surveyed in this region stating this as their means of earning a living.

A further area of interest is in understanding how aware members of the population are about peace agreements. Respondents were specifically asked whether they had heard about the Doha Peace Agreement, signed in 2011. This agreement allowed for a number of measures to incite peace in Darfur, including agreement of a ceasefire, the creation of a compensation fund for Darfur victims and the establishment of a new Darfur regional authority to oversee the region until a referendum has been agreed to determine the regions status within the Sudan. (Enough Project, 2012). Figure 46 shows the responses to this question by state and indicates that the highest levels of awareness are in South Darfur, with only 8.1% of respondents in this region having not heard about the Doha Peace Agreement. In contrast, over 40% of respondents in West Darfur had heard about the agreement. Those who worked and men were more likely to have heard about the peace agreement.





Source: Created by the authors based on data from DFID Sudan survey 2013.

Respondents were also asked about their preferences for both one region in Darfur, over five states and three states in Darfur as opposed to five states. Over 50% of respondents in all three surveyed states had a preference for three states as opposed to five states. Those with higher levels of education, who worked and who were from urban areas were more likely to prefer three states rather than five states. Only in North Darfur was there a majority preference for one region as opposed to five; in both South and West Darfur 63% and 55% of respondents respectively preferred not to have one region over five states. Those from urban areas and who are married were less likely to want one region as opposed to five states.

There are notable differences between the different Darfurian states surveyed, particularly with respect to security and levels of awareness. South Darfur showed noticeably higher levels of security and awareness compared to both North and West Darfur.