

Human Cost of Tyranny in Kurdistan Region of Iraq

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Research Article

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Abstract

Background

The 2003 liberation/invasion of Iraq and the resulting casualties from civilians and armed forces attracted researchers publishing in high prestigious journals but little was mentioned about the events that led to the armed intervention. This paper assesses the human cost of successive Iraqi governments' tyrannical rule in Kurdistan Region of Iraq over three decades.

Method

The two most recent and reliable census datasets of 1947 and 1957 were used to estimate fertility and survival rates by age group under normal circumstances. These were used in the classical Leslie Matrix to predict the 2007 Kurdistan Region of the Iraqi population. Results were contrasted with estimates for the same year that were obtained by the World Food Programme as part of their Food Security Analysis for Iraq to arrive at estimates that would indicate the scale of the loss in human capital from Saddam Hussein's tyranny.

Findings

The Kurdistan Region has lost around 1,911,479 people of which 1,043,549 were male and 867,930 female of different age groups. These include the direct victims of past genocide actions of successive Iraqi governments as well as those who sought refuge beyond the boundaries of the Kurdistan Region during past decades.

Interpretation

Saddam Hussein's actions were directed to all indigenous inhabitants irrespective of gender and age. As such, any possible offspring, had life continued as normal, is counted as human loss. Demographical, socio-political and the environmental impact of Saddam Hussein's tyrannical rule are worthy of further investigation.

Background

As part of the Sykes-Picot agreement of 1916, the southern Kurdish territory that was known as Mosul Vilayet part of the failed Ottoman Empire was linked to the newly established state of Iraq. The Kurdish objection to this pact has historically been recorded in Shaikh Mahmood's successive uprisings in the 20's that were quelled by the then Iraqi army with significant cooperation and support from the British Royal Air Force. The new Iraq, then, went through a period of calm until the seventies where a new uprising started with the growth of the Baathist ideology and their tyrannical rule over Kurdistan areas. Since then, significant portions of the Kurdish population went to armed resistance and mainly lived beyond the large cities and out of the reach of the central government. For that main reason and the constant policies of demographic change and Arabisation, no census data could be reliably collected on

the Iraqi population as a whole for a long period of time. For example, the 1987 census that was conducted did not reach a significant parts of Kurdistan territory, during which Iraq was engaged in the well documented eight-year war with Iran.

It is also well documented that the Iraq-Iran war was a continuation of the Iraqi government's attempts to quell the Kurdish uprising for which Iraq relinquished strategic land including parts of Shatt-ul-Arab sovereignty to Iran in an exchange for closing their borders on the Kurdish Peshmerga in the infamous 1976 Algiers pact.

This pact gave enough strength to the Iraqi powers to activate its full control over the Kurdish population and persistently worked to eliminate them from their land and replace them with Arabs brought from southern Iraq and other Arab countries. The Arabisation of Kurdistan land continued to the last days of Saddam Hussein's rule. The destruction of over 4000 Kurdistan villages, razing them to the ground during the late 80's and cementing many natural springs preventing the continuation of life around these areas were executed. These acts can be compared with the infamous Anfal campaign (A name taken from the Wholly Quran's Surat AL-Anfal '*The Spoils of War*'. The Eighth Chapter of the Holy Quran with 75 verses justifying cutting the roots of unbelievers). This destruction covered the entire Kurdistan areas eliminating a significant number of inhabitants including men, women and children of all ages and the gassing of many villages including the well-known Halabja City in which over 5000 of its inhabitants were killed in one attack. The mass graves unearthed following the Baathist government's downfall are testimonies of their brutality. The remaining inhabitants who were living in the major Kurdistan cities were later hit as a result of the Iraqi army's retreat from the Kuwaiti invasion followed by the Allied armed intervention and they migrated in mass to the border lines of the neighbouring countries of Iran, Turkey and Syria. The author of this article ended up in refugee camps in southern Iran with his family and was later rescued by British colleagues.

Saddam Hussein's continued attacks on the Kurdish people created a large number of licensed criminals so heavily addicted to killing while licensed by the Iraqi security forces, they could not stop following the liberation of Iraq. They turned into terrorists and employed their skills and experiences to terrorising the population with their suicide bombing activities causing major casualties in both the civilians and combat forces with significant socio-economic implications. Many of those terrorists were later found within the more recent ISIS regime.

The circumstances that led to a gradual breaking point in that area have been overlooked by the international media. From the author's viewpoint, although chemical arsenal and arms of mass destruction were seen to be the main driver in the build-up of the coalition forces for Saddam Hussein's removal from power, it was more to do with the flagrant violation of human rights within and beyond Iraq as well as his lack of consideration for International rules by invading Kuwait that created grounds for his removal.

Researchers have concentrated on assessing the security situation and have reported a significantly increasing mortality rate by a factor of 2.5-fold post 2003 armed intervention.¹ Forty months on the liberation/invasion, casualty figures were updated using cluster sampling covering 12801 individuals reporting an increase to 13.3 per 1000 from a 5.5 per 1000 prior to the allied intervention.² Others have estimated casualties both within the civilian population and the combatants in the process of Iraqi liberation/invasion and there have been intense arguments about the validity of their findings have been reported.³ Within the first five years of the fall of Saddam Hussein, reports indicated 33,000 casualties only from the US Armed Forces including 4000 deaths.⁴ In a report prepared for the US Congress following the announcement of the end of 'Operation New Dawn', estimates of wounded US personnel between those returned and not returned to duties were given to be 14 and 16 respectively while Iraqi casualties or civilians and police/security forces were estimated as 9466 and 2237 respectively.⁵ In a report published by The Lancet, the number of listed suicide bombs for the period 2003-10 exceeded 1000 causing 19% of all Iraqi casualties,⁶ while other human cost estimates of 'Operation Iraqi Freedom' were given as high as 4,481 American lives lost, more than 42,000 wounded and 100,000 or more Iraqi civilian deaths with a price exceeding \$800 billion in direct expenditures.⁷ A descriptive study analysed and compared suicide bomb casualties in Iraq that were documented in two datasets: one covering March 20, 2003, to Dec 31, 2010. It reported coalition-soldier deaths from suicide bombs, the other reporting deaths and injuries of Iraqi civilians from armed violence. In addition, the datasets addressed deaths and injuries over time, by bomb subtype and demographic locations.⁸ Some have rightly extended their studies to concentrate on the health implications of the Iraqi war with impacts extending beyond civilian and military deaths and injuries, post-traumatic disorders, traumatic brain injuries and sustainable neurological disorders only over the eight years of the visible Iraqi war.⁹ In addition, the food insecurity implications of the war covering the period 1990 to 2006 has been reported as severe causing Iraq's exclusion from the global economy.¹⁰ Arguments and counter arguments between Gilbert Burnham, Less Roberts and John Bohannon on Iraqi casualties published in Science Magazine indicates the delicacy and the wide interest of this topic both in the eyes of the public and academia alike.¹¹

Much of these findings have appeared in high and prestigious journals, rightly so, for the topic's interest at an international level with Iraq remaining under the vigilance of the world as its continued instability has clearly crossed its borders to cover the entire Middle East. This has sparked Iranian and Turkish interest in their race for higher shares with direct and indirect influences of both America and Russia. This scenario goes back even to the period of the 1920s where a writer has published a comment during the 1923 period when the Treaty of Lausanne was on the table of the League of Nations stating: 'It is strange to find both Iran and Turkey racing for the control of Mosul Vilayet where the vast majority of its population are Kurds and Kurds are not represented there'.¹²

The casualty numbers that have been brought to the public attention through the free media are certainly significant in the loss of human lives. However, it can be argued that the losses were significantly bigger under the ruling of Saddam Hussein's regime with the difference that those were taking place under orders of a government that had its international legitimacy and was represented under the United

Nations Charter. While the more recent events were monitored and reported by the free international media, the older ones were taking place behind doors and beyond the eyes of the International media.

In this paper, a top-down approach was adopted to obtain estimates of the lost human lives that arguably led to the Iran-Iraq war, the invasion of Kuwait and the Desert Storm. The implications of the tyrannical regime that Saddam Hussein and his predecessors ruled Iraq in general and the Kurdish region specifically, did not only cause the loss of human lives that this paper intends to estimate but also the sustained socio-economical loss that came with it for over three decades with implications to date and beyond. The intention here is also to incite economists and social scientists in an attempt to fill the gap that the literature has in estimating the cumulative loss of the Iraqi people and similar tyrannical rules in the hope to make these rulers accountable for their actions leading to a safer and more secure world for all.

Methods

This paper uses the Iraqi census data for the years 1947 and 1957 to estimate survival probabilities for different age groups together with fertility rates. Reliance on these two years' data goes back to the stability of Iraq within that period and the lack of more recent reliable censuses. The only more recent census that can be seen reliable was that of 1965 in which the Kurdish population showed figures that were not in favour of the government at the time. This resulted in blocking the announcement of its figures officially and has remained undisclosed in Bagdad ever since. These results are then used to construct Leslie Matrix models from which age group population projections can be made to the year 2007 based on population estimates that were obtained by the World Food Programme within their Vulnerability Analysis and Mapping that were reported within their 2008 report.¹³ The use of 2007 population figures as a reference point is for its earliest reliable source and no occurrence of significant casualties within Kurdistan Region post allied intervention in Iraq.

These results will be contrasted and compared to arrive at estimates for human loss in Kurdistan Region of Iraq's population as a result of the genocidal operations of Anfal, the destruction of over 4000 Kurdistanian villages, the gassing of many Kurdistanian residential areas and forced migration during the era of Saddam Husain. This period also covers the internal factional war rivalries within the region.

Interests in population growth of species could possibly be traced back to the beginning of civilization as humans lived on hunting other wild animals. As such, our knowledge and attention regarding the population size of nations have also increased with scarcity of resources.

Earlier works of Lewis¹⁴ on the properties and the use of Leslie matrix in tracing population changes are referenced in the literature¹⁵ while it was Leslie^{16,17} who succeeded in publicising it in a way that it got its name since. The settings were later used to estimate population growth rates for a type of shark population (lemon shark, *Negaprion brevirostris*).¹⁸ Since then, numerous publications have been produced on the prediction of population sizes for different species.¹⁹⁻²¹ Furthermore, the properties of

Leslie Matrix have been extensively investigated indicating the importance of the process in a diversity of fields including politics, demography, environment and general biosciences.²²⁻²³

While the method has been reformulated in a state space format and its properties have been furthered and generalised to include more population growth scenarios, the lack of successive, reliable and systematic population data for Iraq would not make the application of dynamically evolving models to be used to obtain population estimates for the years of concern.²⁴

Leslie Matrix equation for population predictions is denoted by

$$N_t = G_t N_{t-1} \quad (1)$$

Where N_t is an $n \times 1$ vector of population figures for n population groups at year t and G_t is an $n \times n$ transition matrix defining successive time transitions with its entries composing of fertility rates and survival probabilities for the relevant population groups of the same population between time t and time $t-1$.

More specifically, population age groups are defined as 0-4, 5-9, 10-14, 15-19, 20-24, 25-29, ... 75-79 and eighty and more.

$$G_{t-1} = \begin{bmatrix} f_1 & f_2 & \cdot & \cdot & \cdot & f_n \\ p_1 & 0 & \cdot & \cdot & \cdot & 0 \\ 0 & p_2 & 0 & \cdot & \cdot & 0 \\ 0 & 0 & p_3 & \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot & \ddots & \cdot & \cdot \\ \cdot & \cdot & \cdot & \cdot & \cdot & \cdot \\ 0 & 0 & 0 & 0 & p_{n-1} & 0 \end{bmatrix}$$

Where f_i represents fertility rate for group i and p_i is the probability of survival from age group $i-1$ to age group i during the transition period of time from $t-1$ to t .

On this basis, the multiple steps ahead forecast function for the population at time $t+k$ from the information available at time t , is described as:

$$y_t(k) = G_t^k N_t$$

Results

The generalised modelling setup described above provides a natural one step and multiple steps ahead forecasts for population age groups based on specific scenarios indicated through defining the transition

matrix G_t . The latter will have the pattern of fertility rates as well as the probabilities of survival as they are estimated from the national data at time t .

In the case of Iraq, the unfortunate past that has run over decades of unrest has not made it possible to obtain reliable estimates of these figures, as there has not been a reliable census since 1947. This is, as indicated, because of the abandonment of the 1965 census for political reasons relating to questions on ethnicity and the subsequent census figures were all obtained at times of the national unrest within Kurdistan Region. In these areas, either the government did not have full access to the territories of Iraqi Kurdistan or the families did not provide reliable information about themselves due to worries of drafting retributions or for tax purposes. Even in the most reliable census of 1957, the question which established the national identity of citizens had a confounding twist to it as it asked about the mother tongue. For this, there were many Kurdish families that used Arabic and/or Turkish languages in their communication especially in the bordering areas and the cities of Erbil and Kirkuk influenced by the Ottoman Empire's rule.

For the purpose of this study, we return to the figures obtained during the 1947 census and in comparison with the figures of 1957 census to estimate fertility rates and probabilities of survival for different age groups. The base data together with fertility profiles, transition probabilities and male to female ratios are given in table 1.

Age	Number	Gender Ratios (M/F)	Survival Probabilities	Fertility Rates
0-4	144068	1.088	0.928	0
05-Sep	135236	1.098	0.976	0
Oct-14	74360	1.114	0.983	0.001
15-19	63551	1.014	0.971	0.15
20-24	35487	0.924	0.954	0.314
25-29	42980	1.047	0.952	0.341
30-34	52080	0.855	0.947	0.307
35-39	33223	1.025	0.944	0.243
40-44	48245	1.119	0.937	0.126
45-49	35755	1.256	0.926	0.02
50-54	26711	1.075	0.906	0
55-59	24347	1.031	0.874	0
60-64	19728	1.081	0.825	0
65-69	14025	1.091	0.744	0
70-74	5780	1.094	0.603	0
75-79	4186	1.001	0	0
80+	7844	1.073	0	0
Total	767606			

Table 1 Kurdistan Region Base Population Data- 1947

The Age pyramid for the Kurdistan Region population as estimated by the World Food Programme (WFP) for 2007 is presented in Figure 1 below. In this, the vertical scale represents age groups of five-year gaps

starting from zero to less than five, five to less than 10 and so on until 80 years and over and the horizontal axis represents the sub-population frequencies within specific classes in absolute terms.

The age pyramid for the same year (2007) and covering the same geographic span based on initial 1947 and 1957 census figures is presented in Figure 2.

Both population estimates representing observational figures from WFP at the time and those estimated based on past fertility and survival rates prior to the escalation of tension are superimposed in Figure 3 for a clear depiction of disparity and hence the estimated loss in human capital.

The above estimates are based on the assumption that the Kurdistan Region continued as part of Iraq and life has continued as equal partners with no unrest, no forced demographic changes and no Arabisation. That is, families have experienced natural growth and expanded based on the set profiles of fertility and survival probabilities that were used in the model. It is therefore possible to refine the current estimates as further information became available.

On this basis, the estimated number of human casualties including those displaced from their homeland over the past fifty years mounting to 1,911,479 of which 1,043,549 are estimated to be of the male sex and the remaining 867,930 are female.

Discussion

This work had a number of objectives:

1. Although it is logical to assume that wrongs cannot be set right by wrongful actions, successive wars and unrest in Iraq have not come about for no reason. In these, Iraq as a state has come to the brink of collapse but has been restored to some extent mainly by the world powers, yet for another episode to In these, the people of Iraq from all sects have kept paying its penalty often with their blood and they have hardly benefited from the enormous wealth that their land can provide. Poverty, corruption and even famine have become synonymous with this country. Often also the penalties have extended to its neighbouring nations and beyond. For those reasons, raising international awareness on the importance and benefits of acceptance, cooperation, peace and security has been paramount as opposed to the destruction based on nothing other than possible short-term personalised egos.
2. The Allied liberation/invasion of Iraq did not come about without good reason. Neither the Iran-Iraq war that lasted over eight years with millions of lives and devastations started without a history. It is therefore critical for scientists to work on and question the origins of such problems otherwise no sustainable solutions can ever be reached. In that respect, this paper is aiming to look into one very small but at the same time very critical and important angle of the dictatorship in Iraq towards the Kurdish population as one of the main causes of these successive failures of the state and the penalties that its nations have paid.

3. Given the history behind these events and the lack of intermediate information, neither practical nor scientific methods could reliably help in estimating losses following a bottom-up approach. Hence the top-down approach followed in this paper is relevant.

4. A major objective of this work is also to incite researchers in all areas of the socio political science, health and economy to work on arriving at reliable estimates of the damage that dictatorships and specifically, Saddam Hussein's tyrannical rule has brought on the Kurdistan Region and to raise them at international courts as a lesson not only for not to be repeated but also for leading to solutions for lasting peace, security and prosperity.

An impressive piece of work in the literature that clearly and, on evidence based arguments, explains why nations fail: The origins of power, prosperity and poverty is worth reading.²⁵

5. As it has been said decades back in the literature, 'war is not healthy for children and living things'. It is well acknowledged that much of the published research on war has been for military purposes and less emphasis has been given to its impact on not only children but on all the living and their peripheral surroundings and beyond including the economy and the environment.²⁶

Declarations

Conflict of Interest Statement

I declare that there is no conflict of interest.

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Figures

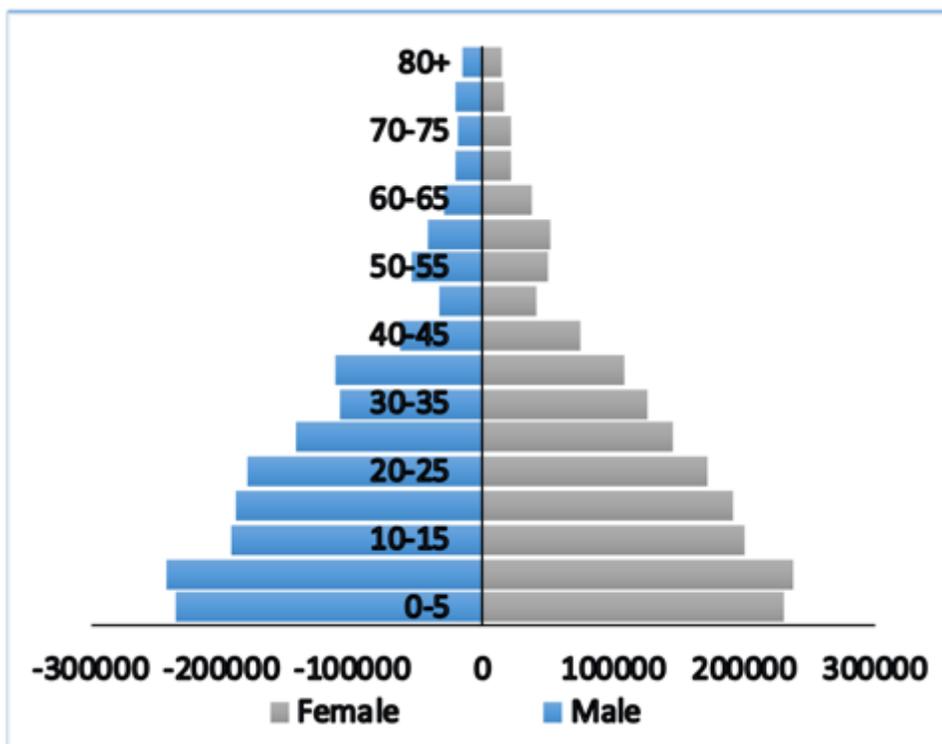


Figure 1

WFP Population Estimates by age group and Gender for 2007

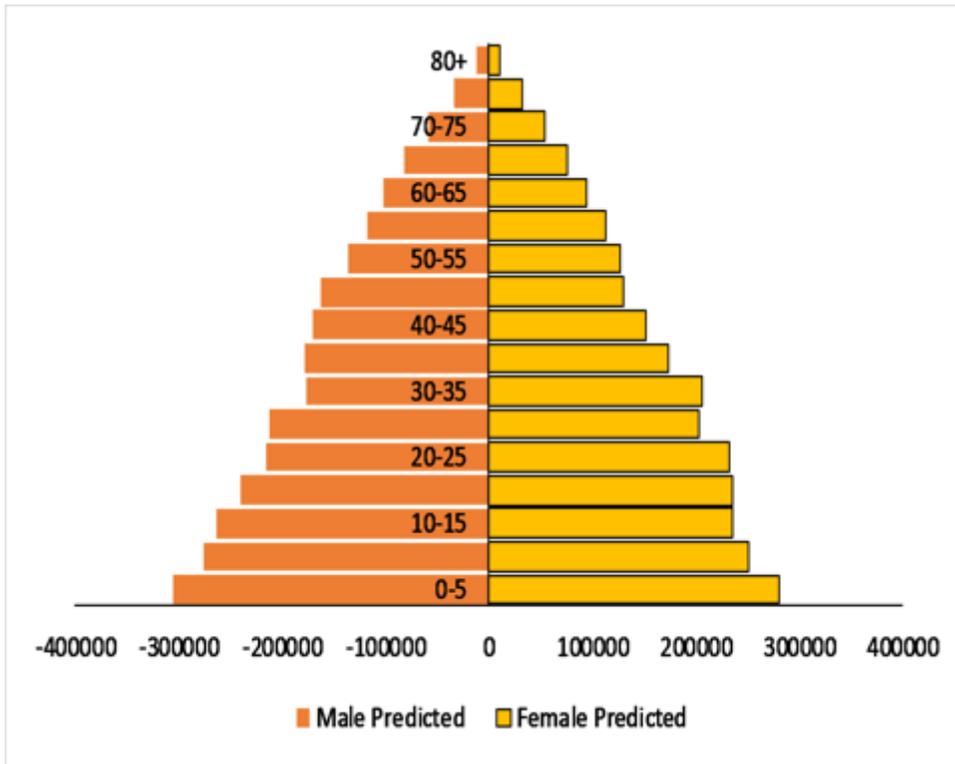


Figure 2

Predicted Population Pyramid at the end of 2007

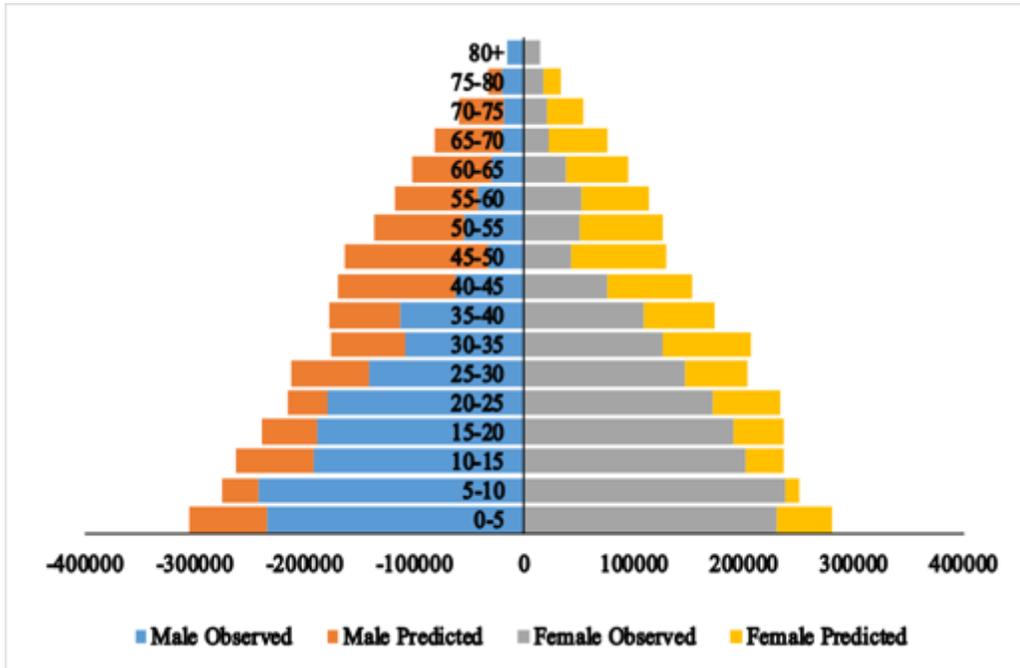


Figure 3

Human Loss by age groups and gender