

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 mentioned about the events that led to the armed intervention. This paper is assessing 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 2007 Kurdistan Region of Iraq 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's tyranny that was imposed on the region.

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

Interpretation Saddam'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. Impacts of changes in demography, socio-political and the environment of Saddam's tyrannical rule are worth further investigation.

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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 iron-fist rule on Kurdistani areas. Since then, significant portions of the Kurdish population went to armed resistance and mainly lived beyond the big 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 decades. For example, the 1987 census, in addition to the lack of reach to a significant part of Kurdistani territory, 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 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 army to activate its full brutality in treating the Kurdish population and persistently worked to eliminate them from their land and replace them with Arabs brought from southern Iraq and even other Arab countries. The Arabisation of Kurdistan land continued to the last days of Saddam's rule. The destruction of over 4000 Kurdistan villages during the late 80's even cementing many natural springs preventing the continuation of life around these areas, 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) that covered the entire Kurdistan areas eliminating a significant number of inhabitants including men, women and children of all age 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 Iraqi army's retreat from the Kuwaiti invasion followed by the Allied armed intervention and 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 later rescued to Britain.

In this process, the Iraqi army created a large number of licensed criminals heavily addicted to killing while licenced by Saddam, 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 killers.

The circumstances that led to a gradual breaking point in that area has been overlooked in the international media. In the author's viewpoint, although chemical arsenal and arms of mass distraction were seen to be the main drive in the build-up of the coalition forces for Saddam's removal from power, it was more his actions within and beyond Iraq violating human rights and his lack of consideration for International rules in invading Kuwait that created grounds for his removal.

Published works have much concentrated on assessing the security situation reporting 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 many hot arguments about the validity of their findings have been reported.³ Within the first five years of the fall of Saddam, 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, as it has been called, estimates of wounded US personnel between 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 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 and 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 reported coalition-soldier deaths from suicide bombs, the other reporting deaths and injuries of Iraqi civilians from armed violence. In addition, they also 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, posttraumatic 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 severely causing Iraq's exclusion from the global economy.¹⁰ Arguments and counter arguments between Gilbert Burnham and 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 topics 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 including the powers of Iran and Turkey racing for higher shares with direct and indirect influences of both America and Russia. This scenario goes back even to the period of twenties where a writer has published a comment 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 were the vast majority of its population are Kurds and Kurds are not represented there.¹²

The casualty numbers that have been brought to public attention through the free media are certainly significant. However, it can be argued that the losses were significantly bigger under the ruling of Saddam's regime with a difference. The former were taking place under orders of a government that had its international legitimacy and represented under the United Nations Charter, monitored and reported by the free international media while the later were taking place behind doors and beyond the eyes of the International media.

In this paper, a top-down approach is 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 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 intension here is also to create an incite economists and social scientists to attempt filling the gap that the literature has in estimating the cumulative loss of the Iraqi 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

The Iraqi census data for the years 1947 and 1957 were used to estimate survival probabilities and fertility rates by age group. 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 Kurdish population showed figures that were not in favour of the government, was officially blocked their announcement and has remained in the locks in Bagdad 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 following 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 resulting from the tyrant genocidal operations of Anfal, the distraction of over 4000 Kurdistan villages, the gassing of the many Kurdistan 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 publicizing 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 further and generalized 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.

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

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 generalized 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 reliable census since the 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 obtained all 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 tax purposes. Even in the most reliable census of 1957, the question asked to identify the national identity of citizens had a wrong twist in it as it asked about the mother tongue. For this, there were scores of 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 show of disparity and hence the estimated loss in human capital.

The above estimates are based on the assumption that 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 become 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 wrong actions, successive wars and unrest in Iraq have not come about for no reason. In these, Iraq as a state has come to a brink of collapse but mended back 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 by their blood and they have hardly benefited from the enormous wealth that their land can provide. Poverty, corruption and even famine have become a synonym of the 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 and peace and security as opposed to destruction that otherwise caused other than possible short-term personalised egos and local benefits are of paramount importance.
2. The Allied liberation/invasion of Iraq did not come about for no 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 unless 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 not scientific methods could reliably help in estimating losses following a bottom-up approach. Hence

the top-down approach followed in this paper while contrasting figures with on the ground and current observations is relevant.

4. A major objective of this work is also to incite researchers in all areas of socio political science, health and economy to work on arriving at reliable estimates of the damages that dictatorships and specifically, Saddam's tyrannical rule brought on Kurdistan Region and raise them at international courts as a lesson not only for not to be repeated but also for leading to durable solutions for durable peace, security and prosperity. An impressive piece of work in the literature that clearly and on evidence based arguments explain 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 that '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 is given to its impact on not only children but 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

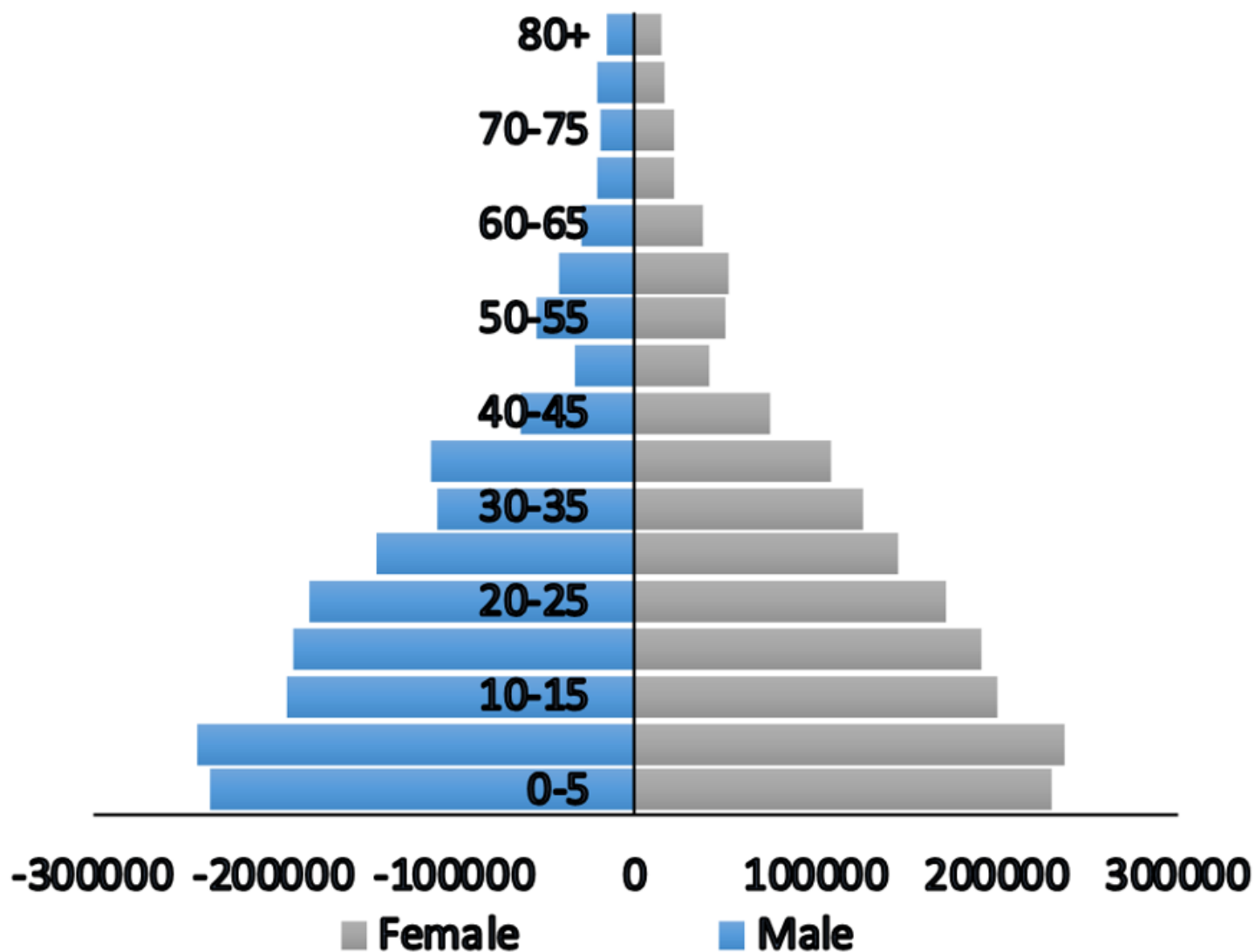


Figure 1

WFP Population Estimates by age group and Gender for 2007

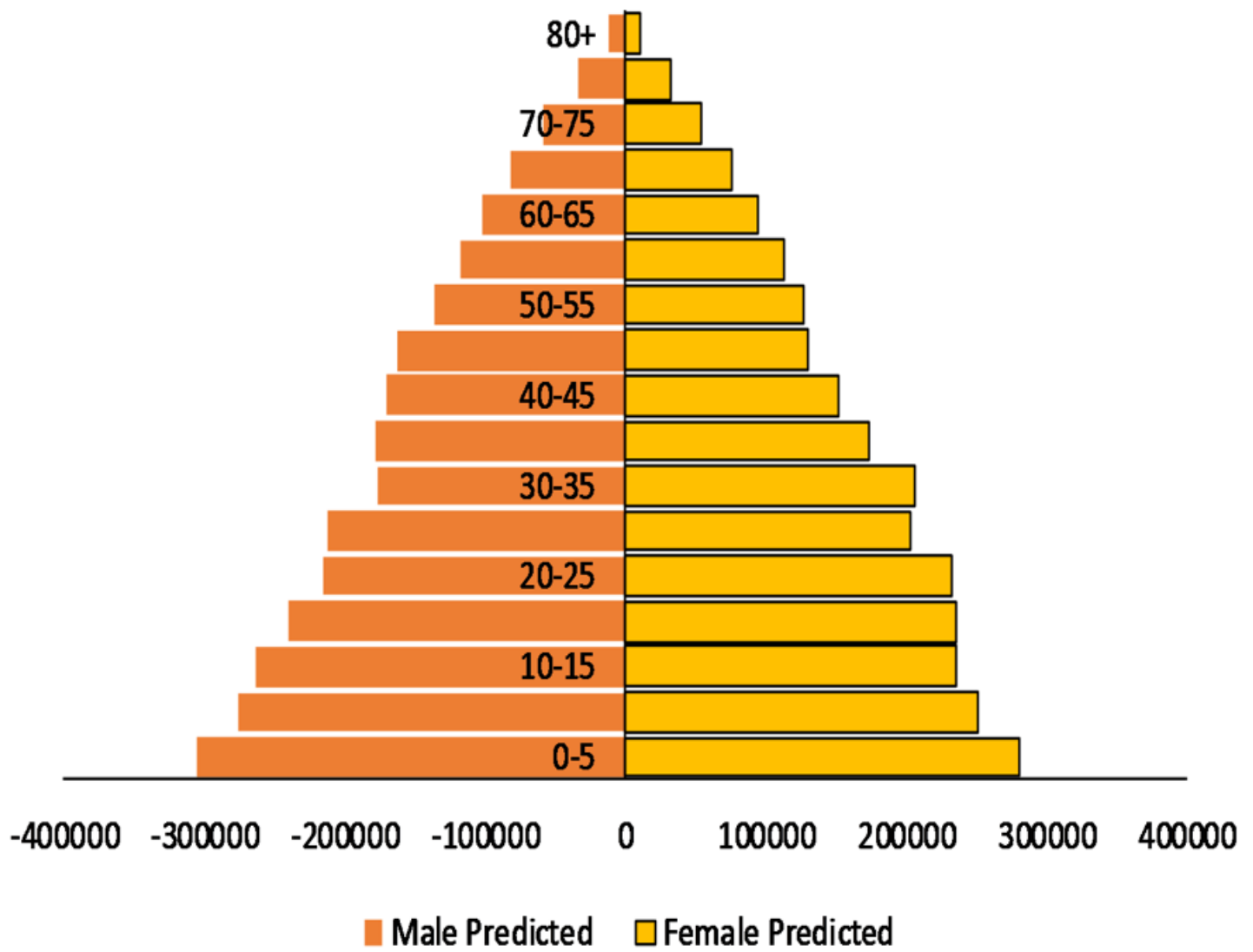


Figure 2

Predicted Population Pyramid at the end of 2007

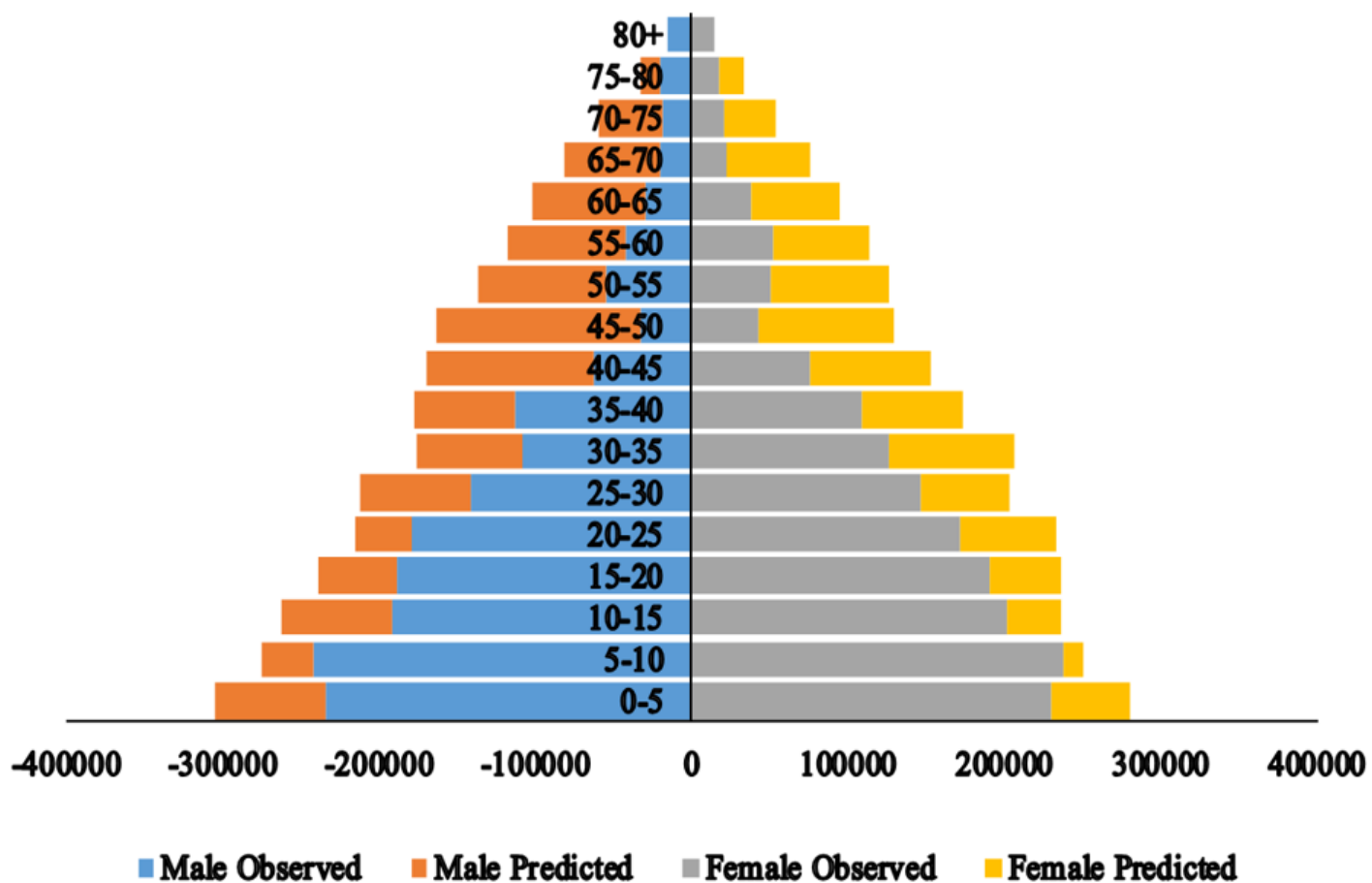


Figure 3

Human Loss by age groups and gender