

Koehler, Anna Franziska

## Article

# Inhumane diplomacy: A systematic review on the effects of international sanctions on poverty

International Trade, Politics and Development (ITPD)

## Provided in Cooperation with:

Department of International Commerce, Finance, and Investment, Kyung Hee University

*Suggested Citation:* Koehler, Anna Franziska (2024) : Inhumane diplomacy: A systematic review on the effects of international sanctions on poverty, International Trade, Politics and Development (ITPD), ISSN 2632-122X, Emerald, Leeds, Vol. 8, Iss. 3, pp. 118-143,  
<https://doi.org/10.1108/ITPD-02-2024-0008>

This Version is available at:

<https://hdl.handle.net/10419/319593>

## Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

## Terms of use:

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



<https://creativecommons.org/licenses/by/4.0/>

# Inhumane diplomacy: a systematic review on the effects of international sanctions on poverty

Anna Franziska Koehler

*Fakultät für Wirtschafts- und Organisationswissenschaften,  
Chair of Economics, in Particular Microeconomics and Competition Policy,  
Universität der Bundeswehr München, Munich, Germany*

## Abstract

**Purpose** – This paper addresses the under-explored collateral damage of economic sanctions, shedding light on the disproportionate harm endured by the most vulnerable segments of societies, which at the same time lack political influence to effect the ruling government into change. The primary objective is to review the literature on humanitarian repercussions associated with sanctions, concluding if they really are a comparably human way of international interference.

**Design/methodology/approach** – Employing a systematic literature review, adhering to the PRISMA approach, and incorporating key term definitions and clear selection criteria, this review analyses 52 studies sourced from Scopus and EconBiz.

**Findings** – The surveyed literature reveals profound adverse impacts of sanctions on health, economic well-being, inequality, and education. Critical gaps in the literature such as disproportional focus on extreme cases like Iran and Iraq, scarce literature on effects on education and inequality, and predominantly inadequate control groups are identified, limiting the generalizability of existing findings.

**Originality/value** – This paper is the first systematic and replicable review of the literature on the effects of sanctions using a capability approach to define poverty. Highlighting gaps in the current research landscape underscores the limited generalizability of reviewed results. Providing a well-structured summary of existing literature, this work serves as a foundation for future research.

**Keywords** Economic sanctions, Poverty, Health, Education, Inequality, Systematic review

**Paper type** Literature review

## 1. Introduction

I must call upon the consciousness of those who, in Iraq and elsewhere, put political, economic or strategic considerations before the fundamental good of the people, and I ask them to show compassion. The weak and innocent cannot pay for mistakes for which they are not responsible. - Pope John Paul II [1]

Sanctions have demonstrated significant adverse effects, including a notable decline in GDP per capita (Neuenkirch and Neumeier, 2015), elevated inflation rates (Heine-Ellison, 2001; Hufbauer *et al.*, 2009), withdrawal of foreign direct investment, foreign aid, and financial grants (Evenett, 2002), coupled with an increase in income inequality (Afsorgbor and Mahadevan, 2016). This economic strain, particularly on fragile economies, increases the risk of economic collapse and exacerbates poverty (Neuenkirch and Neumeier, 2016). Sanctions disproportionately impact the weakest members of the targeted state, with limited influence on the political decision-making of sanctioned regimes.



A substantial body of economic and political literature has explored the impact of economic sanctions on the civilian population of target countries. Findings suggest that such sanctions can inflict significant harm, especially in cases where the targeted regimes lack democratic legitimacy (Neuenkirch and Neumeier, 2015, 2016; Peksen, 2011; Peksen and Son, 2015). Studies primarily concentrate on economic indicators such as economic growth (Neuenkirch and Neumeier, 2015), and financial poverty (Neuenkirch and Neumeier, 2016). The unintended adverse consequences on human well-being, health, morbidity, and mortality are highlighted (Ali and Shah, 2000; Garfield and Santana, 1997; Gibbons and Garfield, 1999). While some researchers, politicians and officials may consider those effects as inevitable collateral damage (Hufbauer, 1998), it is important to acknowledge that innocent civilians may bear the primary burden of sanctions while having limited possibility to channel it into political change as intended by the sanctions (Gutmann *et al.*, 2023). At the same time, studies indicate that sanctions frequently fall short of achieving their intended objectives in altering a target's political behavior (Allen and Lektzian, 2013; Naylor, 2001). As a result, the question arises, whether the wrong people bear the burden of sanctions. Scholars demand a more thorough *a priori* assessment and ongoing monitoring of unintended consequences (Sponeck, 2022, p. 272f), arguing that despite their apparent non-violent nature, sanctions can be as deadly as armed warfare, essentially representing a form of war by other means (Schwab, 1999, p. 54).

Despite the relevance and far reaching consequences of the topic, a systematic literature review on the impact of economic sanctions on poverty in sanctioned countries, integrating a comprehensive definition of poverty and considering possible mitigation strategies, without temporal and geographical constraints, is missing. The focus on extreme cases neglects nuanced variations in the effects of different types and intensities of sanctions. Additionally, the literature tends to emphasize single effects, particularly medical consequences, overlooking broader economic aspects, such as perceived poverty, food security, and access to education. This emphasizes the need for a more multidimensional approach in a systematic review to inform policy decisions.

### 1.1 Defining economic sanctions

When discussing economic sanctions it is important to differentiate three principal strategies of international economic pressure: economic sanctions, trade wars, and economic warfare. Economic sanctions are designed to diminish the overall economic well-being of a target state, using measures like trade restrictions, to coerce the target government into altering its political behavior (Pape, 1997). The primary motives behind imposing sanctions are: (1) compelling target states to cease threats or violations against another state's sovereignty, including violence or destabilization of its government; (2) promoting democratic change, protecting democracy, or destabilizing autocratic regimes; and (3) safeguarding the citizens of a target state from political repression and upholding human rights (Hufbauer *et al.*, 2009). This coercion can occur either directly, by convincing the target government that the issues at stake aren't worth the economic cost, or indirectly, by generating popular pressure that forces concessions or inciting a popular revolt leading to a new government. Economic sanctions encompass various forms, with financial sanctions, trade sanctions, and travel sanctions being the most relevant (Gutmann *et al.*, 2023). Financial sanctions involve restrictions on international financial markets and freezing foreign assets, trade sanctions range from specific goods bans to complete trade embargoes, and travel sanctions prevent the target country's elite from visiting imposing nations. Notably, Western democracies, particularly the United States and the European Union, are frequent issuers of economic sanctions, while African countries are often the targets (Felbermayr *et al.*, 2020).

In contrast, trade wars involve a state causing economic harm to persuade the target to agree to more favorable trade terms. Unlike sanctions, trade wars focus on international economic policies rather than the target's political behavior. The primary measure is the change in the price of affected goods or services. Economic warfare seeks to weaken an adversary's overall economic potential to undermine its military capabilities. Unlike sanctions and trade wars, it does not inflict economic pain but aims to reduce military production to make certain political objectives unattainable (Pape, 1997).

### *1.2 Multi-dimensional definition of poverty*

This literature review adopts a multidimensional approach to define poverty, drawing from the concept of capability poverty (Sen and Sen, 1987; Sen, 2014; Sen, 1995) and operationalized for example by the World Bank's Multidimensional Poverty Measure (MPM). Unlike traditional measures such as income, consumption, and welfare, this definition considers factors like unemployment, education and health, offering a more comprehensive understanding of poverty. Those factors significantly influence overall well-being, impacting income generation and consumption. Sanctions can lead to shortages in essential goods, affecting living conditions beyond what monetary poverty metrics capture. For example, low income's effects are not as pervasive as those of factors like unemployment, which induces psychological stress, motivation and skill deficits, self-confidence issues, increased morbidity, and disruptions to family and social life (Sen, 2014). Comparing income with health or nutritional status reveals the latter's broader and more profound effects on well-being, influencing income-earning capacity. Morbidity and life expectancy rates, key indicators of well-being or deprivation, underscore the intricate relationship between health and poverty (Sen, 2014). Therefore, the capabilistic notion of poverty in this review offers a much needed comprehensive understanding of the consequences for sanctioned populations.

## **2. Methods**

### *2.1 Approach*

This systematic literature review is a foundational step in grasping the effects of sanctions on poverty in targeted countries. It involves a comprehensive search of academic articles and publications, and identifies gaps and areas where further research is needed. I adhere to established systematic review guidelines, including the formulation of the research question, the definition of inclusion and exclusion criteria, and a structured search strategy. The systematic review aligns with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) concept to minimize bias in the process and ensure replicability.

### *2.2 Research question and search strategy*

The main research question identified and addressed in my research is: *What effects do international sanctions have on the poverty in the targeted country?*, hypothesizing that economic sanctions significantly affect poverty levels, leading to increased economic hardship for vulnerable populations. To examine this, I specified the following ancillary question: *What and how reports existing literature on those effects?*. I employ an extensive view on poverty based on extensive search terms searching the databases Scopus and EconBiz on 27th Sept. 2023 [2].

### *2.3 Selection criteria and screening*

From each selected article relevant data, including study objectives, methodologies, findings, and conclusions, was extracted. The systematic review encompasses a synthesis of the

chosen studies, involving categorization and analysis of their findings, while identifying recurring themes and trends.

The formulation of clear inclusion and exclusion criteria ensures a replicable selection process:

- (1) Only inclusion of primary research reporting of direct and/or indirect measures of impact on poverty consisting of:
  - Economic poverty
  - Food security or prices
  - Access to education
  - Effects on inequality (regarding income and gender)
  - Health care outcomes: individual (death rates, malnutrition, increase in illnesses) and institutional (government spending on health care system, availability of medication and access to health care equipment)
- (2) Solely inclusion of papers published in English
- (3) Exclusion of reviews, letters to the editor, commentaries and
- (4) Exclusion of sanctions which are not international/inter-state

Even though each included study underwent an assessment of its quality.

Taking into account established criteria that consider factors such as study design, methodology, and data source reliability—the selection of articles is based on its relevance for answering the research question rather than any primary assessment of scientific quality and risk of bias.

#### *2.4 Data extraction*

To minimize type I error, the selection process and data extraction is based on human analysis of the title, abstract and full text regarding the range of data collection periods, sample size, research methods, sanctioned and sanctioning agents, availability of reporting on the effectiveness of targeted sanctions and/or mitigation strategies and the used comparison/control group. The literature is additionally clustered by the investigated dimension(s) of poverty followed by a cluster definition based on further sub-groups of dependent variables. Supersets include (1) economic poverty (e.g. food security, employment, prices, household consumption/spending, household income), (2) inequality (e.g. by income or gender), (3) health-care (e.g. life expectancy, malnutrition, mortality, single disease level, disease spreading, availability of medication, availability of medical services, government budget), and (4) access to education (e.g. enrollment rates, average years of schooling). Furthermore, the findings from the studies are extracted and again categorized into clusters based on whether a significant direct link between sanctions and relevant independent variables was identified and, if so, the specific results.

### **3. Results**

#### *3.1 Included studies*

Initially, the search yielded 1953 articles, with 1,233 retrieved from Scopus and 720 from EconBiz. To streamline the dataset, 1,258 duplicates and non-English articles were removed, resulting in 695 articles for primary screening based on title and abstract. Through an in-depth review of titles, abstracts, and full texts, results a final set of 52 articles [3].

3.2 Study characteristics

The systematic review encompasses studies conducted between 1950 and 2021, with a record range spanning from 1 to 70 years and an average range of 14.67 years 31% (16/52) of the included studies employ qualitative approaches, 73% (38/52) utilizing quantitative methods[4]. The studies' sample sizes range from 1 to 1999 sanctioned countries, predominantly focusing on Iran and Iraq. Notably, 75% of the analyzed papers are single-case studies, with 25 papers (48%) studying Iran and 14 papers (27%) studying Iraq. Only 19% of the studies (10/52) are dedicated to single-case analyses of countries other than Iran and Iraq. Additionally, 23% of the studies (12/52) involve comparisons between multiple countries instead of single case studies.

There is a major emphasis on the United States (US) and the United Nations (UN) as sanctioning agents, with 52% of the studies exclusively considering UN and/or US sanctions. In contrast, 12% of the studies include other sanctioning agents, and 25% do not specify the sanctioning countries. As control or comparison groups, 34 studies (65%) primarily use the prior or past situations within the same country. Moreover, two studies (4%) compare the sanctioned country to comparable, non-sanctioned countries, while seven studies (13%) incorporate both types of comparison. The majority of included studies (67%) focus on the effects of sanctions on healthcare followed by 48% considering the impact on economic poverty. Beyond humanitarian impacts, 12% of the studies also consider the effectiveness of sanctions, and five papers discuss whether sanctions were targeted or not. A further break down is provided in Table 1. Furthermore, 27% of the papers (14/52) analyze mitigation strategies, with ten of the 52 exploring national strategies and eight international approaches. The analyzed literature did focus little on smart sanctions—only four papers explicitly discuss consequences of those targeted measures.

3.3 Impact of sanctions on poverty in targeted countries

*Impact on economic poverty* Multiple resources report an increase in unemployment, increase in prices, and food scarcity. This results in an increase in poverty, decline in household spending and decrease in household income. Work by Williams (2021) shows a significant

**Table 1.**  
Frequency of  
dependent variables in  
52 reviewed studies

Dependent variable	Absolute frequency	Percentage
<i>Health</i>	35	67%
Malnutrition	12	23%
Life expectancy	5	10%
Mortality	18	35%
Disease level(s)	10	19%
Availability of medication or medical services	18	35%
Government budget	2	4%
<i>Economic poverty</i>	25	48%
Employment	10	19%
Prices	12	23%
Income	9	17%
Spending/consumption	6	12%
Food availability	6	12%
<i>Access to education</i>	10	19%
Gender differences	4	8%
<i>Inequality</i>	13	25%
by Gender	10	19%
Income inequality	3	6%

**Source(s):** Table by author

negative response of household consumption to sanctions, and government consumption is adversely associated with the intensity of sanctions. Additionally, in Iran the real expenditure of households has been declining, particularly in urban areas, partially caused by adverse effects on employment and labor force participation (Laudati and Pesaran, 2023). Kelishomi and Nisticò (2022) find a significant decline of 16.4 percentage points in the employment growth rate in the manufacturing sector in Iran between 2012 and 2014 and women were disproportionately affected by the decrease in employment rates (Laudati, 2023). However, other authors report less clearly directed dynamics. For example, Nosratabadi (2019) finds that the demand for skilled production workers even increases during sanction years, resulting in a rise in the real average wage, but on the other hand the demand for non-production workers decreases, leading to a fall in the real average wage. Furthermore, examined papers investigating the influence of sanctions on food availability document adverse effects: sanctions contribute to hunger and starvation, affecting food distribution, availability, and stability in domestic markets (Allen and Lektzian, 2013; Afesorgbor, 2021; Hejazi and Emamgholipour, 2022). However, investigating 199 countries, a study by Allen and Lektzian (2013) concludes, that this impact on food supplies is rather limited, possibly due to humanitarian exemptions and the inclusion of less drastically sanctioned countries.

Additionally, it's crucial to consider that socio-economic indicators in sanctioned countries may be influenced by factors predating specific sanctions. For example, Bahar *et al.* (2021) argue that insufficient evidence exists to attribute the worsening socio-economic crisis in Venezuela to sanctions.

*Impact on inequality* The examined differentiates between income and gender inequality. Studies examining effects of sanctions on income inequality are scarce; the consequences of sanctions on gender inequality have received more extensive research.

*Income Inequality:* Laudati and Pesaran (2023) analyzed effects of the UN and US sanctions on Iran, reporting a rise in the Gini coefficient, indicating increasing income inequality [5]. Even though mobility, financial, and trade sanctions have the most substantial negative effects on economic growth in general, military and arms sanctions are the only sanctions where González (2022) was able to report a significant negative impact on income inequality.

*Gender Inequality:* Sanctions significantly restrict women's rights in the target state, marked by a substantial loss of government spending on education. Studying 84 sanctioned countries, Perry (2022) finds that cuts in government education spending due to sanctions disproportionately affect women by reducing literacy parity between men and women and as a consequence decreasing women's participation in the labor force. Studying the adverse effects of sanctions on secondary school education in Iran, gender disparities are notable and women also have paid the higher price of the systematic decrease of the employment rate in Iran, with significant declines in female labor force participation after sanctions were imposed (Laudati, 2023) [6]. Additionally, studying multiple sanctioned countries, Gutmann *et al.* (2021) finds a disproportional effect on the life expectancy of women. This goes hand in hand with the finding, that the imposition of sanctions leads to a significant increase in women's mortality rates from HIV/AIDS infections, doubling the rates, and an average mortality rate increase of 12%, unlike men who do not experience such negative effects (Miromanova, 2023). Contrarily, Al-Ani *et al.* (2011) find that in Iran, the gender disparities go in the different direction, sanctions causing a higher infant mortality rate for males than females [7].

*Impact on the Health Sector* Economic sanctions can exert profound and diverse effects on the healthcare systems of targeted nations, even when they do not explicitly encompass pharmaceuticals or medical equipment. The examined research encompasses heterogeneous findings. Following a study of 30 countries subjected to sanctions, Williams (2021) contends that there is no conclusive evidence establishing a significant link between sanctions and life expectancy or infant mortality. Complementary, Allen and Lektzian (2013) posit that even



though sanctions can significantly reduce immunization rates and government spending on healthcare, this effect is mainly pronounced when imposed on nations involved in military conflicts, and despite their impact on healthcare resources, sanctions do not exhibit a significant effect on life expectancies [8].

However, the majority of researcher presents a contrasting view, stating that the sanctions had a severe impact on the healthcare sector. For the example of Iraq [Gutmann et al. \(2021\)](#) finds that an average episode of UN sanctions reduced life expectancy by about 1.2–1.4 years, with corresponding but milder effects under US sanctions (0.4–0.5 years). Transmission channels include an increase in child mortality and cholera deaths, coupled with a decrease in public spending on healthcare and a lack of drug availability ([Asadi-Pooya et al., 2016](#)). Inadequate funding, rising inflation, extreme increase in costs, and medical shortages contribute to the impediments faced by the rehabilitation sector.

Even when medication and medical equipment are available, there often is no budget for transportation, cooling, management tools, or training of the medical staff to use the equipment, leading to an inefficient distribution and delay until the equipment can be used ([Shahabi et al., 2020](#)) [9]. Despite the wide range of literature available, the accuracy of health-related statistics during sanction periods in Iraq should be questioned due to survey data manipulation, as observed by [Dyson and Cetorelli \(2017\)](#). Also in Iran economic sanctions manifest through tangible economic indicators, such as a significant increase in cost of a healthy diet, contributing to increased food insecurity and malnutrition among children ([Hejazi and Emamgholipour, 2022](#); [Afesorgbor, 2021](#)). They have an adverse effect on life expectancy, with financial market development and institutional quality playing pivotal roles ([Ha and Nam, 2022](#)). A reduction in the GDP growth rate, triggered by sanctions, leads to a subsequent cut in healthcare spending in the targeted countries. The pharmaceutical supply chain faces substantial challenges under sanctions ([Bastani et al., 2022](#)), due to hindered financing, purchasing, importing, and manufacturing of pharmaceuticals, as can be seen on the example of Iran ([Karami Matin et al., 2022](#); [Kheirandish et al., 2018](#)).

So far, Cuba is the only nation in the world that was denied medicine as part of a US embargo ([Schwab, 1999](#), p. 54). Since most pharmaceutical drugs are at least partially developed by US companies, the field of health care dramatically crippled. It serves as a poignant case study, illustrating the limitations of national mitigation strategies, not being able to impede declining nutritional levels, increased infectious diseases, and challenges in healthcare access ([Garfield and Santana, 1997](#)). An increase in diseases is caused by a lack of vaccination and medication (e.g. HIV/AIDS) as well as due to severe malnutrition (e.g. malnutrition-induced optic and peripheral neuropathy). High gasoline and fuel prices lead to an inability of patients to travel to hospitals and disrupt refrigeration of medication ([Schwab, 1999](#), p. 73ff). Similar effects can be observed in Haiti, where malnutrition in young children more than doubled, child mortality increased and treatment as well as medicine shortages occurred ([Gibbons and Garfield, 1999](#)).

Sanctions contribute to heightened mental health issues due to uncertainty, stress, malnutrition, and restricted access to psychiatric medication ([Schwab, 1999](#)). Furthermore, denied access to medical journals limits knowledge dissemination and modern treatment methods ([Sponeck, 2022](#), p. 44; [Schwab, 1999](#), p. 73f). In summary, economic sanctions pose intricate challenges, affecting immunization rates, government spending, nutrition, healthcare access, and pharmaceutical supply chains in Iraq, Iran, and Cuba. Although less likely to cause immediate deaths than military intervention, sanctions' resource reduction has comparable humanitarian implications ([Allen and Lektzian, 2013](#)).

*Impact on access to education* Economic sanctions profoundly affect educational enrollment, seen notably in Iraq and Iran. Resources are diverted from education to pressing needs, and children are forced into income-contributing activities ([Laudati and Pesaran, 2023](#); [Sponeck, 2022](#), p. 56). Iran's education expenditure declined by 58% from 2007



to 2013, resulting in a 0.1-year decrease in children's schooling and a 4.8% point drop in college attendance likelihood (Moeeni, 2022). While Laudati (2023) reports adverse impact on secondary and high-school education in Iran, Moeeni (2022) contrasts stable primary and secondary enrollment rates with a decline in undergraduate programs and an 11.5% decrease in first-year college students. Consequences intensify for females (Laudati, 2023) and those exposed longer to sanctions (Moeeni, 2022). In Haiti, sanctions caused a significant decrease in gross school enrollment, rotating attendance among siblings, increased child labor, and a rise in street children (Gibbons and Garfield, 1999).

Sanctions impede academic mobility, affecting both incoming and outgoing students, and influences foundations and funds (Golovina *et al.*, 2021) [10]. In conclusion, economic sanctions disrupt education access, impacting students at various levels, creating long-term challenges for future generations in sanctioned countries (Laudati, 2023; Sponeck, 2022; Moeeni, 2022; Gibbons and Garfield, 1999).

### 3.4 Mitigation strategies, targeted sanctions and their effectiveness

Broadly speaking, the investigated literature identified three channels to counteract adverse effects: (1) Household-level coping strategies, such as modifying dietary practices and reducing expenses like enrollment fees; (2) Nation-level mitigation strategies, which involve rationing programs or reallocating government budgets in the sanctioned country; (3) International mitigation strategies implemented by the sanctioning countries, other international organizations, or nations, encompassing measures like exempting pharmaceutical products, implementing programs like the Oil for Food Program, or establishing dedicated aid initiatives; and (4) so called smart sanctions [11].

Mitigation strategies on a household level include altering dietary habits, engaging in informal economic activities, relocating to relatives' homes, selling possessions, forming informal unions, reducing school attendance, and resorting to child indentured servitude (Gibbons and Garfield, 1999). Additional or alternative sources of income maybe pursued such as begging for children as well as prostitution for women, while costly events such as marriages are postponed (Schwab, 1999; Sponeck, 2022). Needless to say, that such counter-strategies often have severe negative effects on nutrition, well-being and education.

Supplementary national mitigation strategies discussed by the literature include modified policies (Gibbons and Garfield, 1999), and the implementation of rationing (Garfield and Santana, 1997). Cuba serves as a positive example. Due to universal access to primary health services, food rationing systems and a highly educated population, the medical system remained for a remarkable long time resilient, maintaining comparably low mortality rates (Schwab, 1999). When goods could no longer be stretched to meet the needs of the entire population, preferential access to essential goods for women and children has emerged (Garfield and Santana, 1997). Nevertheless, national strategies to counteract the adverse effects of economic sanctions are limited. Rationing and preferential access for certain subgroups may create new vulnerable groups (e.g. adult men and the elderly) and it is rarely possible to fully counteract a rise in mortality (Garfield and Santana, 1997; Reid *et al.*, 2007). Additionally, national mitigation strategies mostly include the reallocation of government spending to fulfill basic needs—causing other long-term effects for example through a substantial decrease of government spending on education (Perry, 2022).

The implementation of international assistance is difficult and often fails to achieve intended outcomes. Challenges include a lack of financing, inefficient implementation or even resentment by the local population and/or political groups, viewing aid as a way to assuage the guilt of sanctioning powers (Gibbons and Garfield, 1999). One of the largest humanitarian programs in combination with sanctions was the Oil-for-Food program implemented in Iraq from 1996 until 2003. Even though it partially prevented a food-crisis, it had major

shortcomings including an unfair budget allocation to districts, a poor implementation with a high level of bureaucracy, a flawed reporting and monitoring system and the generally short sighted nature of the program. No funding was allocated for overheads, training of teachers and medical staff, institutional research, etc. While medication and medical equipment could be imported, there was no budget for an efficient distribution, installation, training, management tools or even cooling systems; therefore, a significant proportion never reached the population in need. Despite various attempts, including the introduction of a green list [12], the Oil-for-Food program failed to make a distinct impact in key areas in Iraqi life (Sponeck, 2022). Private organizations, like Kathy Kelly's Voices in the Wilderness, contribute individually but have limited overall impact (Sponeck, 2022, p. 123).

The examined literature shows that even targeted or smart sanctions, intended to minimize harm to civilians while pressuring specific actors, often fall short in protecting humanitarian conditions. Perry (2022) suggests that despite their reputation for being less corrosive, such sanctions fail to sufficiently address civilian needs. Instead, they can exacerbate economic instability, leading elites to divert resources away from civilians, worsening human rights situations. Gutmann *et al.* (2021) found that while targeted sanctions have a smaller estimated effect compared to other types, the difference is not statistically significant and the severity and targetedness of sanctions do not reliably predict harm to the target population. Naylor (2001) demonstrates that smart sanctions frequently fail to achieve their goals and inadvertently harm innocent populations due to circumvention tactics by the targeted individuals, companies, or industries. On the other hand, the tightening of sanctions against Iran and Syria, moving from smart sanctions to more comprehensive measures, led to a significant worsening of the humanitarian situation (Moret, 2015), signaling that the targeted approach had less negative effects on the overall population. Overall, while targeted sanctions may exert pressure on specific entities, their humanitarian consequences remain significant, with unintended harm to civilian populations and limited efficacy in achieving desired outcomes.

#### 4. Discussion

The reviewed literature actively sought to identify, explain, and quantify changes in the welfare of socio-economically disadvantaged groups during periods of sanctions. Nevertheless, it is crucial to approach the reported results with caution, as many studies focus on correlations rather than establishing causal relationships and in general there exists a tendency to not publish negative findings. Notably, even so-called "smart" sanctions were found to disproportionately affect the most vulnerable segments of the population while mitigation strategies rarely counteract the severe humanitarian impact. This review identified the following limitations in the existing body of literature:

*Limited view of sanctioning countries* A major limitation in the existing literature lies in its predominantly Western focus. Studies tend to concentrate on the sanctions imposed by the UN and US, neglecting the diverse array of sanctioning countries worldwide such as Canada [13].

*Limited analysis of sanctioned countries* The examined literature focuses primarily on single-case studies of extreme sanctioned countries rather than providing a nuanced analysis. When attempting to draw meaningful generalizations, it needs to be considered that the existing literature predominantly examines only the most severe instances, Iran and Iraq. A further limitation is that the reviewed literature primarily focused on studying the effects of sanctions in countries significantly weaker politically than the sanctioning agents. However, as the utilization of this foreign policy tool becomes more widespread, targeting increasingly powerful states like China and Russia, and as these states forge alliances with actors in the global South, effects of sanctions may potentially vary, impacting also poverty in sanctioning or third countries.

*Lack of research on inequality and education* The majority of existing studies focus solely on the impact of sanctions on economic poverty and the health care sector, often overlooking their ripple effect on inequality and education. Neglecting such dimensions restricts the ability to develop holistic policies that address the broader socio-economic repercussions of sanctions.

*Inadequate comparison/control groups* Many studies lack an adequate comparison or control group, often oversimplifying the situation by analyzing general trends. The complexity of the geopolitical landscape, especially in a situation where other countries may impose sanctions in the first place, often coupled with military, political or economic tensions, demands more sophisticated methodologies that consider the intricacies of each case. Failing to account for these complexities hinders the ability to attribute changes in poverty solely to the imposition of sanctions.

*Missing analysis of effectiveness of sanctions* Most importantly, the existing literature fails to acknowledge that the primary driver of sanctions lies in the political leverage resulting from economic difficulties. Consequently, it is crucial to correlate the observed humanitarian impacts with the efficacy of the imposed sanctions. Additionally, an examination should be undertaken to identify specific sub-groups of sanctioned countries experiencing disproportionate suffering, while not having the socio-economic stand to influence political decision making.

## 5. Conclusion

Examining the impact of sanctions on poverty in targeted nations is crucial given their common use in international relations. This review explores the existing literature considering the intricate interplay between political strategies and the well-being of vulnerable populations. The findings provide a ground-work for further research and emphasize, that the current literature landscape is not broad enough to draw generally applicable conclusions. Furthermore, the ongoing debate overlooks a crucial dimension: whether the incurred costs are deemed as collateral damage, necessary for the success of sanctions, or if they disproportionately burden the most vulnerable members of society without political influence. Therefore, I strongly emphasize the need for further research of general mechanisms to provide policymakers and international organizations a scientific basis to consider humanitarian consequences.

This paper makes a significant contribution to existing literature by outlining trends and characteristics of previous studies on the effects of international sanctions, along with suggestions for future research. Implications for further research include the use of a larger sample of sanctioned countries, moving beyond singular case studies to identify overarching patterns. Future studies should implement a more nuanced definition of poverty, integrating dimensions such as education and inequality, e.g. regarding education's long-term implications for future generations. The literature review underscores the need for methodological improvements such as better control variables and more adequate control groups, given the diverse external conditions under which countries are typically sanctioned, such as military conflict or regime type. Most importantly, future research should explore the relationship between the humanitarian effects of sanctions and their political effectiveness, since economic hardship is an essential aspect of the sanctioning mechanism in the first place. Additionally, results need to be set into relation with side-effects of alternative options such as military intervention, and the concept of effective sanctions functioning through deterrence rather than implementation. Moreover, the increasing popularity of smart sanctions necessitates a focused examination of their effects compared to comprehensive measures, considering observed changes in poverty levels and other potential unintended consequences. In the case of an intended implementation of new sanctions scientists are

required to provide a comprehensive pre-sanction assessment, including a thorough analysis of the socio-economic conditions in the target country and ongoing monitoring to evaluate the impact on affected populations. Without such knowledge, the effectiveness and humanitarian implications of sanctions remain inadequately evaluated.

In a world marked by escalating geopolitical tensions, addressing the impact of sanctions on poverty underscores the necessity for a balanced foreign policy. The examined literature highlights the human cost of sanctions and advocates against their indiscriminate deployment, emphasizing the importance of thorough investigations into potential effects on vulnerable groups.

## Notes

1. Political Council for Justice and Peace, John Paul II, and the family of peoples, The Holy Father to the Diplomatic Corps (1978–2002), Vatican City, p. 264.
2. The exact search terms are provided in the additional material (Appendix [Table A1](#)).
3. An overview over the included literature as well as the resulting clusters is provided in the additional material (Appendix [Table A2](#)).
4. Two studies employ both methods and therefore are counted in both categories.
5. The Gini coefficient in Iran is reported to be close to levels seen in the US, which is amongst the highest of the advanced countries.
6. Effects include the number of schools as well as the number of teachers.
7. Furthermore, rural residence showing higher infant mortality rates than urban areas.
8. However, the work of [Allen and Lektzian \(2013\)](#) also suggests that they can have a statistically significant and substantively large effect on health-adjusted life expectancies, emphasizing the nuanced nature of their consequences.
9. For example, despite subsidization, the price of antiepileptic drugs increased up to 300%.
10. For instance, Russia became less attractive for foreign students, and sanctions impacted the closure of the Russian branch of the MacArthur Foundation, drawing negative attention towards Soros and his funds ([Golovina et al., 2021](#)).
11. Smart sanctions refer to a set of economic and political measures designed to target specific entities or sectors within a country, with the aim of minimizing the adverse effects on the general population. Unlike traditional, broad-based sanctions that may apply to entire countries or economies, smart sanctions are intended to be more focused, targeting individuals, companies, or industries directly linked to objectionable policies or actions.
12. List of humanitarian goods for unrestricted import.
13. According to the Global Sanctions Database (GSDB) is Canada a major sanctioning agent.

## References

- Afesorgbor, S.K. (2021), “Sanctioned to starve? The impact of economic sanctions on food security in targeted states”, in *Research Handbook on Economic Sanctions*, Vol. 438.23.
- Afesorgbor, S.K. and Mahadevan, R. (2016), “The impact of economic sanctions on income inequality of target states”, *World Development*, Vol. 83, pp. 1-11, doi: [10.1016/j.worlddev.2016.03.015](#).
- Al Jawher, M.H. (1997), “Impact of the economic sanctions on duodenal ulcer in Iraq”, *EMHJ-eastern Mediterranean Health Journal*, Vol. 3 No. 3, pp. 420-424, doi: [10.26719/1997.3.3.420](#).
- Al-Ani, Z.R., Al-Hiali, S.J. and Al-Farraj, H.H. (2011), “Secular trend of infant mortality rate during wars and sanctions in western Iraq”, *Saudi Medical Journal*, Vol. 32 No. 12, pp. 1267-1273.

- Ali, M.M. and Shah, I.H. (2000), "Sanctions and childhood mortality in Iraq", *The Lancet*, Vol. 355 No. 9218, pp. 1851-1857, doi: [10.1016/s0140-6736\(00\)02289-3](https://doi.org/10.1016/s0140-6736(00)02289-3).
- Allen, S.H. and Lektzian, D.J. (2013), "Economic sanctions: a blunt instrument?", *Journal of Peace Research*, Vol. 50 No. 1, pp. 121-135, doi: [10.1177/0022343312456224](https://doi.org/10.1177/0022343312456224).
- Asadi-Pooya, A.A., Tavana, B., Tavana, B. and Emami, M. (2016), "Drug adherence of patients with epilepsy in Iran: the effects of the international economic sanctions", *Acta Neurologica Belgica*, Vol. 116 No. 2, pp. 151-155, doi: [10.1007/s13760-015-0545-6](https://doi.org/10.1007/s13760-015-0545-6).
- Asadi-Pooya, A.A., Azizimalamiri, R., Badv, R.S., Yarali, B., Asadollahi, M., Homayoun, M. and Sharifi, S. (2019), "Impacts of the international economic sanctions on Iranian patients with epilepsy", *Epilepsy and Behavior*, Vol. 95, pp. 166-168, doi: [10.1016/j.yebeh.2019.04.011](https://doi.org/10.1016/j.yebeh.2019.04.011).
- Azami, S.R., Hosseini, S.M., Alimohammadzadeh, K., Jafari, M. and Bahadori, M.K. (2021), "International sanctions and the procurement of medical equipment in Iran: a qualitative study", *Medical Journal of the Islamic Republic of Iran*, Vol. 35, 180, doi: [10.47176/mjiri.35.180](https://doi.org/10.47176/mjiri.35.180).
- Bahar, D., Bustos, S., Morales-Arilla, J. and Santos, M. (2021), "Impact of the 2017 sanctions on Venezuela: revisiting the evidence", SSRN 3809344.
- Bastani, P., Dehghan, Z., Kashfi, S.M., Dorosti, H., Mohammadpour, M. and Mehralian, G. (2022), "Challenge of politico-economic sanctions on pharmaceutical procurement in Iran: a qualitative study", *Iranian Journal of Medical Sciences*, Vol. 47 No. 2, pp. 152-161, doi: [10.30476/IJMS.2021.89901.2078](https://doi.org/10.30476/IJMS.2021.89901.2078).
- Bonati, M. (2002), "The embargo as violation of human rights", *Giornale Italiano di Farmacia Clinica*, Vol. 16 No. 4, pp. 210-215.
- Bundervoet, T. and Verwimp, P. (2005), *Civil War and Economic Sanctions: Analysis of Anthropometric Outcomes in Burundi*, Households in Conflict Network.
- Chakravarty, A., Parey, M. and Wright, G.C. (2021), "The human capital legacy of a trade embargo", *Journal of the European Economic Association*, Vol. 19 No. 3, pp. 1692-1733, doi: [10.1093/jeaa/jvaa052](https://doi.org/10.1093/jeaa/jvaa052).
- Daponte, B.O. and Garfield, R. (2000), "The effect of economic sanctions on the mortality of Iraqi children prior to the 1991 Persian gulf war", *American Journal of Public Health*, Vol. 90 No. 4, pp. 546-552, doi: [10.2105/ajph.90.4.546](https://doi.org/10.2105/ajph.90.4.546).
- Demir, F. and Tabrizy, S.S. (2022), "Gendered effects of sanctions on manufacturing employment: evidence from Iran", *Review of Development Economics*, Vol. 26 No. 4, pp. 2040-2069, doi: [10.1111/rode.12917](https://doi.org/10.1111/rode.12917).
- Dyson, T. and Cetorelli, V. (2017), "Changing views on child mortality and economic sanctions in Iraq: a history of lies, damned lies and statistics", *BMJ Global Health*, Vol. 2 No. 2, e000311, doi: [10.1136/bmjgh-2017-000311](https://doi.org/10.1136/bmjgh-2017-000311).
- Evenett, S.J. (2002), "The impact of economic sanctions on South African exports", *Scottish Journal of Political Economy*, Vol. 49 No. 5, pp. 557-573, doi: [10.1111/1467-9485.00248](https://doi.org/10.1111/1467-9485.00248).
- Felbermayr, G., Kirilakha, A., Syropoulos, C., Yalcin, E. and Yotov, Y.V. (2020), "The global sanctions data base", *European Economic Review*, Vol. 129, 103561.
- Garfield, R. (1999), *The Impact of Economic Sanctions on Health and Well-Being*, Overseas Development Institute, London.
- Garfield, R. and Santana, S. (1997), "The impact of the economic crisis and the us embargo on health in Cuba", *American Journal of Public Health*, Vol. 87 No. 1, pp. 15-20, doi: [10.2105/ajph.87.1.15](https://doi.org/10.2105/ajph.87.1.15).
- Gharibi, F., Imani, A., Haghi, M. and Dalal, K. (2022), "Relationship between political-economic sanctions and catastrophic health costs in multiple sclerosis patients in Iran", *Iranian Journal of War and Public Health*, Vol. 14 No. 4, pp. 455-464.
- Ghiassi, G., Rashidian, A., Kebriaeezadeh, A. and Salamzadeh, J. (2016), "The impact of the sanctions made against Iran on availability to asthma medicines in Tehran", *Iranian Journal of Pharmaceutical Research: IJPR*, Vol. 15 No. 3, pp. 567-571.

- Gibbons, E. and Garfield, R. (1999), "The impact of economic sanctions on health and human rights in Haiti, 1991-1994", *American Journal of Public Health*, Vol. 89 No. 10, pp. 1499-1504, doi: [10.2105/ajph.89.10.1499](https://doi.org/10.2105/ajph.89.10.1499).
- Golovina, Y.Y., Arakelyan, N.R., Kara-Kazaryan, T.V., Tkacheva, N.A. and Totskaya, O.V. (2021), "On some aspects and consequences of the impact of anti-Russian sanctions on vocational education in the Russian Federation", in Popkova, E.G. and Sergi, B.S. (Eds), *Modern Global Economic System: Evolutional Development vs. Revolutionary Leap. ISC 2019. Lecture Notes in Networks and Systems*, Springer, Cham, Vol. 198 Supp., doi: [10.1007/978-3-030-69415-9\\_72](https://doi.org/10.1007/978-3-030-69415-9_72).
- González, F.A. (2022), "International sanctions and development: evidence from Latin America and the Caribbean (1950-2019)", *Economic Affairs*, Vol. 42 No. 1, pp. 70-86, doi: [10.1111/ecaf.12506](https://doi.org/10.1111/ecaf.12506).
- Gutmann, J., Neuenkirch, M. and Neumeier, F. (2021), "Sanctioned to death? The impact of economic sanctions on life expectancy and its gender gap", *The Journal of Development Studies*, Vol. 57 No. 1, pp. 139-162, doi: [10.1080/00220388.2020.1746277](https://doi.org/10.1080/00220388.2020.1746277).
- Gutmann, J., Neuenkirch, M. and Neumeier, F. (2023), "The impact of economic sanctions on target countries: a review of the empirical evidence", *EconPol Forum*, Vol. 24 No. 3, pp. 5-9.
- Ha, L.T. and Nam, P.X. (2022), "An investigation of relationship between global economic sanction and life expectancy: do financial and institutional system matter?", *Development Studies Research*, Vol. 9 No. 1, pp. 48-66, doi: [10.1080/21665095.2022.2032237](https://doi.org/10.1080/21665095.2022.2032237).
- Heine-Ellison, S. (2001), "The impact and effectiveness of multilateral economic sanctions: a comparative study", *The International Journal of Human Rights*, Vol. 5 No. 1, pp. 81-112, doi: [10.1080/714003707](https://doi.org/10.1080/714003707).
- Hejazi, J. and Emamgholipour, S. (2022), "The effects of the re-imposition of US sanctions on food security in Iran", *International Journal of Health Policy and Management*, Vol. 11 No. 5, pp. 651-657, doi: [10.34172/ijhpm.2020.207](https://doi.org/10.34172/ijhpm.2020.207).
- Hufbauer, G.C. (1998), "Sanctions-Happy USA", *Policy Briefs PB98-4*, Peterson Institute for International Economics, available at: <https://ideas.repec.org/p/iee/pbrief/pb98-4.html>
- Hufbauer, G.C., Schott, J.J., Elliott, K.A. and Oegg, B. (2009), *Economic Sanctions Reconsidered: History and Current Policy*, 3rd ed., Institute for International Economics, Washington, DC.
- Jamel, H., Plasschaert, A. and Sheihm, A. (2004), "Dental caries experience and availability of sugars in Iraqi children before and after the United Nations sanctions", *International Dental Journal*, Vol. 54 No. 1, pp. 21-25, doi: [10.1111/j.1875-595x.2004.tb00248.x](https://doi.org/10.1111/j.1875-595x.2004.tb00248.x).
- Karami Matin, B., Soltani, S., Byford, S., Soofi, M., Rezaei, S., Kazemi-Karyani, A., Hosseini, E. and Tolouei Rakhshan, S. (2022), "The impacts of economic sanctions on the performance of hospitals in Iran: implications for human rights", *International Journal of Human Rights in Healthcare*, Vol. 17 No. 2, pp. 117-126, doi: [10.1108/ijhrh-07-2021-0151](https://doi.org/10.1108/ijhrh-07-2021-0151).
- Kelishomi, A.M. and Nisticò, R. (2022), "Employment effects of economic sanctions in Iran", *World Development*, Vol. 151, 105760, doi: [10.1016/j.worlddev.2021.105760](https://doi.org/10.1016/j.worlddev.2021.105760).
- Kheirandish, M., Varahrami, V., Kebriaeezade, A. and Cheraghali, A.M. (2018), "Impact of economic sanctions on access to noncommunicable diseases medicines in the Islamic Republic of Iran", *Eastern Mediterranean Health Journal*, Vol. 24 No. 1, pp. 42-51, doi: [10.26719/2018.24.1.42](https://doi.org/10.26719/2018.24.1.42).
- Kuntz, D. and Jackson, C. (1994), "The politics of suffering: the impact of the US embargo on the health of the Cuban people: report of a fact-finding trip to Cuba, June 6-11, 1993", *International Journal of Health Services*, Vol. 24 No. 1, pp. 161-179, doi: [10.2190/16vn-57rr-afk-xw90](https://doi.org/10.2190/16vn-57rr-afk-xw90).
- Laudati, D. (2023), "Evidence and policy implications of sanctions in the long run: the case of Iran", *EconPol Forum*, Vol. 24 No. 3, pp. 27-30.
- Laudati, D. and Pesaran, M.H. (2023), "Identifying the effects of sanctions on the Iranian economy using newspaper coverage", *Journal of Applied Econometrics*, Vol. 38 No. 3, pp. 271-294, doi: [10.1002/jae.2947](https://doi.org/10.1002/jae.2947).
- Miles, S. and Alborz, A. (2014), "Sectarianism, sanctions and invasion: the challenge of promoting educational equality in Iraq", in *Crises, Conflict and Disability*, Routledge, pp. 187-194.



- Miromanova, A. (2023), "Sanctions and their impacts on medical trade and health outcomes", *Review of International Economics*, Vol. 32 No. 1, pp. 252-280, doi: [10.1111/roie.12700](https://doi.org/10.1111/roie.12700).
- Moeeni, S. (2022), "The intergenerational effects of economic sanctions", *The World Bank Economic Review*, Vol. 36 No. 2, pp. 269-304, doi: [10.1093/wber/lhab024](https://doi.org/10.1093/wber/lhab024).
- Moret, E.S. (2015), "Humanitarian impacts of economic sanctions on Iran and Syria", *European Security*, Vol. 24 No. 1, pp. 120-140, doi: [10.1080/09662839.2014.893427](https://doi.org/10.1080/09662839.2014.893427).
- Moteng, G., Raghutla, C., Njangang, H. and Nembot, L.N. (2023), "International sanctions and energy poverty in target developing countries", *Energy Policy*, Vol. 179, 113629, doi: [10.1016/j.enpol.2023.113629](https://doi.org/10.1016/j.enpol.2023.113629).
- Mulder-Sibanda, M. (1998), "Nutritional status of Haitian children, 1978-1995: deleterious consequences of political instability and international sanctions", *Revista Panamericana de Salud Pública*, Vol. 4 No. 5, pp. 346-349, doi: [10.1590/s1020-49891998001100008](https://doi.org/10.1590/s1020-49891998001100008).
- Naylor, R.T. (2001), *Economic Warfare: Sanctions, Embargo Busting, and Their Human Cost*, UPNE, Boston.
- Neuenkirch, M. and Neumeier, F. (2015), "The impact of un and us economic sanctions on GDP growth", *European Journal of Political Economy*, Vol. 40, pp. 110-125, doi: [10.1016/j.ejpoleco.2015.09.001](https://doi.org/10.1016/j.ejpoleco.2015.09.001).
- Neuenkirch, M. and Neumeier, F. (2016), "The impact of us sanctions on poverty", *Journal of Development Economics*, Vol. 121, pp. 110-119, doi: [10.1016/j.jdeveco.2016.03.005](https://doi.org/10.1016/j.jdeveco.2016.03.005).
- Nosratabadi, J. (2019), "Employment, skill upgrading, and international trade: the case of sanctions against Iran".
- Pape, R.A. (1997), "Why economic sanctions do not work", *International Security*, Vol. 22 No. 2, pp. 90-136.
- Peksen, D. (2011), "Economic sanctions and human security: the public health effect of economic sanctions", *Foreign Policy Analysis*, Vol. 7 No. 3, pp. 237-251, doi: [10.1111/j.1743-8594.2011.00136.x](https://doi.org/10.1111/j.1743-8594.2011.00136.x).
- Peksen, D. and Son, B. (2015), "Economic coercion and currency crises in target countries", *Journal of Peace Research*, Vol. 52 No. 4, pp. 448-462, doi: [10.1177/0022343314563636](https://doi.org/10.1177/0022343314563636).
- Perry, K. (2022), "Better for whom? Sanction type and the gendered consequences for women", *International Relations*, Vol. 36 No. 2, pp. 151-175, doi: [10.1177/00471178211018843](https://doi.org/10.1177/00471178211018843).
- Popal, G. (2000), "Impact of sanctions on the population of Iraq", *EMHJ-eastern Mediterranean Health Journal*, Vol. 6 No. 4, pp. 791-795, doi: [10.26719/2000.6.4.791](https://doi.org/10.26719/2000.6.4.791).
- Reid, B.C., Psoter, W.J., Gebrian, B. and Wang, M.Q. (2007), "The effect of an international embargo on malnutrition and childhood mortality in rural Haiti", *International Journal of Health Services*, Vol. 37 No. 3, pp. 501-513, doi: [10.2190/mr65-2605-1285-0406](https://doi.org/10.2190/mr65-2605-1285-0406).
- Salehi-Isfahani, D. (2023), "The impact of sanctions on household welfare and employment in Iran", *Middle East Development Journal*, Vol. 15 No. 2, pp. 189-221, doi: [10.1080/17938120.2023.2248697](https://doi.org/10.1080/17938120.2023.2248697).
- Schwab, P. (1999), *Cuba: Confronting the US Embargo*, St. Martin's Press, New York.
- Sen, A. (1995), *Inequality Reexamined*, Harvard University Press, Cambridge.
- Sen, A. (2014), "Development as freedom (1999)", in *The Globalization and Development Reader: Perspectives on Development and Global Change*, p. 525.
- Sen, A. and Sen, A. (1987), "The Standard of Living: Lecture II, Lives and Capabilities", *Tanner Lectures in Human Values: The Standard of Living*, Chapter, Cambridge University Press, Cambridge, pp. 20-38.
- Shafaei, A. and Block, K. (2022), "Covid-19 and sanctions affecting afghans in Iran", *Journal of Immigrant and Refugee Studies*, Vol. 22 No. 2, pp. 1-13, doi: [10.1080/15562948.2022.2025636](https://doi.org/10.1080/15562948.2022.2025636).



- Shahabi, S., Teymurlouy, A.A., Shabaninejad, H., Kamali, M., Lankarani, K.B. and Mojgani, P. (2020), "Physical rehabilitation in Iran after international sanctions: explored findings from a qualitative study", *Globalization and Health*, Vol. 16 No. 1, pp. 1-10, doi: [10.1186/s12992-020-00618-8](https://doi.org/10.1186/s12992-020-00618-8).
- Sponeck, H.V. (2022), *A Different Kind of War: The UN Sanctions Regime in Iraq*, Berghahn Books, New York.
- Taheri, E. and Guven-Lisaniler, F. (2018), "Gender aspect of economic sanctions: case study of women's economic rights in Iran", *Gender Aspect of Economic Sanctions: Case Study of Women's Economic Rights in Iran* (December 19, 2018).
- Williams, K. (2021), "Do international sanctions reduce household and government consumption in developing countries?", *South African Journal of Economics*, Vol. 89 No. 2, pp. 196-217, doi: [10.1111/saje.12281](https://doi.org/10.1111/saje.12281).
- Yousefzadeh, S. and Gassmann, F. (2012), "Children of Iran: born into a middle-income state, caught between war, embargo and rising social indicators", (tech. rep.).

### Further reading

- Ali, H. (2004), "Hepatitis B infection among Iraqi children: the impact of sanctions", *EMHJ-eastern Mediterranean Health Journal*, Vol. 10 Nos 1-2, pp. 6-11, doi: [10.26719/2004.10.1-2.6](https://doi.org/10.26719/2004.10.1-2.6).
- Smeets, M. (2018), "Can economic sanctions be effective?", *WTO Staff Working Paper, No. ERSD-2018-03, World Trade Organization (WTO)*, doi: [10.30875/0b967ac6-en](https://doi.org/10.30875/0b967ac6-en).
- Wagle, U. (2002), "Rethinking poverty: definition and measurement", *International Social Science Journal*, Vol. 54 No. 171, pp. 155-165, doi: [10.1111/1468-2451.00366](https://doi.org/10.1111/1468-2451.00366).

### Corresponding author

Anna Franziska Koehler can be contacted at: [anna.koehler@unibw.de](mailto:anna.koehler@unibw.de)

#	Variable	Key words
1	Sanctions	TITLE(sanction* OR embargo* OR conditional welfare OR welfare conditionality OR economic sanction* OR monetary sanction* OR financial sanction* OR smart sanction*)
2	Economic Poverty	TITLE-ABS-KEY((economic well*being OR human* cost OR poverty OR deprivation OR impoverishment OR financial aid OR poor OR financial development OR distributional effect* OR development aid OR (economic resource* AND access) OR Income OR earning* OR wage* OR salar* OR asset* OR expenditure* per capita OR personal expenditure* OR household expenditure* OR consumption per capita OR household consumption OR financial status* OR wealth* OR socio*economic status OR social class* OR social rank* OR social environment OR *employment OR socioeconomic factor*) OR (starvation OR malnourish* OR malnutrition OR undernourish* OR undernutrition OR food *security OR food scarcity OR hidden hunger OR (food market AND (restriction OR tariff OR access OR development governance)) OR food supply chain OR food value chain OR food commodity market AND NOT disease))
3	Health	TITLE-ABS-KEY(health* OR disease* OR illness* OR mortality OR well*being index OR quality adjusted life year OR preventable death* OR suicid* OR life expectanc* OR ((health system OR treatment OR medicine*) AND (access OR accessible)) OR health risk* OR psychological harm OR psychological well*being OR public health)
4	Income Inequality	TITLE-ABS-KEY((*equality AND (economic OR financial OR socioeconomic)) OR development gap* OR social exclusion OR income*distribution OR economic marginali*ation OR income *equality OR income disparity OR Gini*Coefficient OR Robin*Hood*Index)
5	Education	TITLE-ABS-KEY((school OR education* OR school attendance OR school enrol*ment OR educational enrol*ment OR adult literacy OR literacy rate OR numeracy rate OR educational access AND NOT health literacy)

**Note(s):** Utilized with Boolean operators (1 AND (2 OR 3 OR 4 OR 5))

**Source(s):** Table by author

**Table A1.**  
Key words

**Table A2.**  
Overview of included literature

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
A different kind of war: The UN sanctions regime in Iraq	von Sponeck	2022	1996–2003	1	Quantitative, Qualitative	x	x		x	Yes
Cuba: confronting the US embargo	Schwab	1999	NN	1	Qualitative	x	x			Yes
Do International Sanctions Reduce Household and Government Consumption in Developing Countries?	Williams	2021	1996–2015	30	Quantitative		x			Mixed
Economic sanctions: a blunt instrument?	Allen, Lektzian	2013	1990–2007	199	Quantitative	x	x			Mixed
Economic warfare: sanctions, embargo busting, and their human cost	Naylor	2001	NN		Qualitative	x	x			Mixed
Employment effects of economic sanctions in Iran	Moghaddasi Kelishomi, Nisticò	2022	2008–2014	1	Quantitative		x			Yes
Employment, Skill Upgrading, and International Trade : the Case of Sanctions Against Iran	Nosratabadi	2019	2001–2015	1	Quantitative		x			Yes

(continued)

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
Evidence and policy implications of sanctions in the long run: the case of Iran	Laudati	2023	1989–2019	1	Quantitative		x	Gender	x	Yes
Humanitarian impacts of economic sanctions on Iran and Syria	Moret	2013	NN	2	Qualitative	[x]				Yes
Identifying the Effects of Sanctions on the Iranian Economy Using Newspaper Coverage	Laudati, Pesaran	2023	1979–2021	1	Quantitative		x	Income, Gender	[x]	Yes
Impact of the 2017 sanctions on Venezuela - Revisiting the evidence	Bahar, Bustos, Morales, Santos	2019	2010–2018	1	Qualitative	x	x			No
International sanctions and development: evidence from Latin America and the Caribbean (1950–2019)	Gonzales	2022	1950–2019	41	Qualitative		x	Income		Yes
Sanctioned to Death? The Impact of Economic Sanctions on Life Expectancy and its Gender Gap	Gutmann, Neuenkirch, Neumeier	2021	1977–2012	98	Quantitative	x	[x]	Gender	[x]	Yes

(continued)

Table A2.

Table A2.

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
Sanctioned to Starve? The Impact of Economic Sanctions on Food Security in Targeted States	Afesorgbor	2021	1990–2014	66	Quantitative	x	x			Yes
The Effects of the Re- imposition of US Sanctions on Food Security in Iran	Hejazi, Enamgholipour	2022	2017–2019	1	Quantitative		x			Yes
The embargo as violation of human rights	Bonati	2002	NN		Quantitative	x				Yes
The human capital legacy of a trade embargo	Chakravarty, Parey, Wright	2021	1996–2011	1	Quantitative	x	x		x	Mixed
The Impact of Sanctions on Household Welfare and Employment in Iran	Salehi-Isfahani	2023	1984–2020	1	Quantitative		x			Yes
Children of Iran: born into a Middle-Income State, Caught Between War, Embargo and Rising Social Indicators	Yousefzadeh, Gassmann	2012	1984–2009	1	Quantitative			Gender		Yes

(continued)

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
Gender Aspect of Economic Sanctions : case Study of Women's Economic Rights in Iran	Taheri, Lisaniler	2018	1990–2016	1	Qualitative, Quantitative		x	Gender	[x]	Yes
Gendered effects of sanctions on manufacturing employment: evidence from Iran	Demir, Tabrizy	2022	1995–2014	1	Quantitative		x	Gender		Mixed
International sanctions and energy poverty in target developing countries	Moteng, Raghutla, Njangang, Nembot	2023	1996–2019	97	Quantitative		x	Income		Yes
An investigation of relationship between global economic sanction and life expectancy: do financial and institutional system matter?	Ha, Nam	2022	1995–2018	148	Quantitative	x			[x]	Yes
Challenge of Politico-Economic Sanctions on Pharmaceutical Procurement in Iran: a Qualitative Study	Bastani, Dehghan, Kashfi, Dorosti, Mohammadpour, Mehralian	2022	2019	1	Qualitative	x				Yes

(continued)

Table A2.

Table A2.

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
Changing views on child mortality and economic sanctions in Iraq: a history of lies, damned lies and statistics.	Dyson, Cetorelli	2017	1974–2010	1	Quantitative	x				Yes
Civil War and Economic Sanctions: analysis of Anthropometric Outcomes in Burundi COVID-19 and Sanctions Affecting Afghans in Iran	Bundervoet, Verwimp	2005	1993–1998	1	Quantitative	x	x		[x]	Yes
Dental caries experience and availability of sugars in Iraqi children before and after the United Nations sanctions	Jamel, Plasschaert, Shelham	2004	1989–1995	1	Quantitative	x	[x]			Mixe
Drug adherence of patients with epilepsy in Iran: the effects of the international economic sanctions	Asadi-Pooya, Tavana, Tavana, Enami	2016	2010–2011	1	Quantitative	x				Yes

(continued)



Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
The impact of the economic crisis and the US embargo on health in Cuba	Garfield, Santana	1997	1980–1996	1	Quantitative	x			x	Yes
The Impact of Economic Sanctions on Health and Human Rights in Haiti, 1991–1994	Gibbons, Garfield	1999	1991–1994	1	Quantitative	x	x		x	Mixed
Hepatitis B infection among Iraqi children: The impact of sanctions	Ali	2004	1994–1998	1	Quantitative	x				Yes
Impact of economic sanctions on access to noncommunicable diseases medicines in the Islamic Republic of Iran	Kheirandish, Varahrami, Kebriaeezade, Cheraghali	2018	2008–2013	1	Quantitative	x				Yes
Impact of sanctions on the population of Iraq	Popal	2000	1988–1999	1	Quantitative	x				Yes
Impact of the economic sanctions on duodenal ulcer in Iraq	Al Jawher	1997	1989–1993	1	Quantitative	x				Yes

(continued)

Table A2.

Table A2.

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
Impacts of the international economic sanctions on Iranian patients with epilepsy	Asadi-Pooya, Azizimalamiri, Badv, Yarali, Asadollahi, Homayoun, Sharifi	2019	2019	1	Qualitative	x				Yes
	Azami, Hosseini, Alimohammadzadeh, Jafari, Bahadori	2021	2018–2019	1	Qualitative	x				Yes
Sanctions and the Procurement of Medical Equipment in Iran: a Qualitative Study	Mulder-Sibanda	1998	1978–1994	1	Quantitative	x				Yes
Nutritional status of Haitian children, 1978–1995: deleterious consequences of political instability and international sanctions	Shahabi, Teymourlouy, Shabaninejad, Kamali, Lankarani, Mojtani	2020	2019	1	Qualitative	x				Yes
Physical rehabilitation in Iran after international sanctions: explored findings from a qualitative study	Miromanova	2023	1988–2021	67	Quantitative	x	[x]	Gender	[x]	Yes
Sanctions and their impacts on medical trade and health outcomes										

(continued)

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
Secular trend of infant mortality rate during wars and sanctions in Western Iraq	Al-Ani, Al-Hiali, Al-Farraji	<a href="#">2011</a>	1987–2010	1	Quantitative	x		Gender		Yes
Relationship between Political-Economic Sanctions and Catastrophic Health Costs in Multiple Sclerosis Patients in Iran	Gharibi, Imani, Haghi, Dalal	<a href="#">2022</a>	2018–2019	1	Quantitative	x	[x]		[x]	Yes
The effect of an international embargo on malnutrition and childhood mortality in rural Haiti	Reid, Psoter, Gebrian, Wang	<a href="#">2007</a>	1989–1996	1	Quantitative	x				Yes
The effect of economic sanctions on the mortality of Iraqi children prior to the 1991 Persian Gulf War	Daponte, Garfield	<a href="#">2000</a>	1991	1	Quantitative	x		Gender		Yes
The Impact of Economic Sanctions on Health and Well-being	Garfield	<a href="#">1999</a>	1992–1994	3	Quantitative	x	x			Yes

(continued)

Table A2.

Table A2.

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
The Impact of the Sanctions Made Against Iran on Availability to Asthma Medicines in Tehran	Ghiasi, Rashidian, Kebriaeezadeh, Salamzadehd	2016	2012–2013	1	Quantitative	x				Yes
The impacts of economic sanctions on the performance of hospitals in Iran: implications for human rights	Karami Matin, Soltani, Byford, Soofi, Rezaei, Kazemi-Karyani, Hosseini, Tolouei Rakhshan	2022	2019–2020	1	Qualitative	x				Yes
The politics of suffering: the impact of the US Embargo on the health of the Cuban people: report to the American public health association of a fact-finding trip to Cuba, June 6-11, 1993	Kuntz, Jackson	1994	1993	1	Qualitative	x	x			Yes
Better for whom? Sanction type and the gendered consequences for women	Perry	2022	(1990–2014)	84	Quantitative		x	Gender	x	Yes

(continued)

Paper Title	Author	Year	Timeframe of records	Sample size (# countries)	Methods	Focus on health <sup>1</sup>	Focus on economic poverty <sup>1</sup>	Focus on inequality <sup>1</sup>	Focus on access to education <sup>1</sup>	Negative impact reported <sup>2</sup>
On Some Aspects and Consequences of the Impact of Anti-Russian Sanctions on Vocational Education in the Russian Federation	Golovina, Arakelyan, Kara-Kazaryan, Tkacheva, Totskaya	2021	2014–2018	1	Qualitative		x		x	Mixed
The intergenerational effects of economic sanctions	Moeeni	2021	1995–2015	1	Quantitative		x		x	Yes
Sectarianism, sanctions and invasion: the challenge of promoting educational equality in Iraq	Miles, Alborz	2014	2010	1	Qualitative				x	Yes

**Note(s):** <sup>1</sup>[x]: not included in dependent variables but considered (e.g. as control variable), <sup>2</sup>Mixed: Adverse effects reported for some dependent variables / study populations but not all

**Source(s):** Table by author

Table A2.