

Poverty Alleviation by Rapprochement System and Sustainable Economic Development

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Abstract

This paper proposes and develops a new model for understanding how institutional justice affects sustainable economic development. Conventional economics emphasizes budget size, whereas the proposed model emphasizes the justice score. This is because budget effectiveness is based on a “justice score” that ranges from 0 to 1. By comparing Denmark and Bangladesh, I show how a lack of justice reduces the effectiveness of government spending. The study also explains how anti-corruption measures and social protection can increase economic stability. Despite constant GDP growth, Bangladesh's development score is limited to 33.08% due to a deficit in institutional justice. However, Denmark has achieved a sustainable development score of 78.35% with the same resources. This model seeks to demonstrate that a justice score below 50% signals a heightened risk of political instability and authoritarian rule. The presence of a dictator indicates a low level of justice, and the model also predicts it even when justice is low. An attempt has been made to demonstrate that justice serves as a moral factor in the economic system by mathematically analyzing the GDP growth rates of different countries and the average value of justice. This study concludes that justice is an economic multiplier, arguing that policymakers should prioritize institutional fairness and equitable resource distribution over capital accumulation alone to ensure long-term socio-economic sustainability and political stability.

Keywords: *Justice Score · Sustainable Development · Mathematical Modeling · Economic Justice · Moral Multiplier · Political Instability · Mudarabah · Musharaka · Anti-corruption · Binary Logic · Institutional Fairness · Qard al-Hasan, Bangladesh.*

Introduction

This study focuses on the crisis facing economic and political systems. The wheel of history is constantly turning, and the entire world is witnessing the inevitable change in the system of governance. Historical data from the 20th and 21st centuries include the Arab Spring and recent regime changes in South Asia. The review and continuity of the situation show that the lack of justice in dictatorships and economic inequality provoke mass uprisings. The

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investigation of these changes reveals reasons such as corruption, economic inequality, and the erosion of rights, showing that even if people can tolerate oppression for a long time, the final coup closes all avenues for the ruler's survival. According to the World Justice Project's average index, all these countries have a justice score below 0.50, which accelerates the change of power. Neopatriarchy and Institutional Degradation: Neopatriarchy is a form of governance in which a particular group uses democracy to maintain power by appointing unqualified loyalists to key positions. Research has shown that such regimes, which often last 25 to 35 years, eventually undergo regime change because they prioritize individual and party interests over the national good, leading to institutional instability.

Injustice is Creating Poverty and Refugees

According to the Bangladesh Progress Report 2020, 8.6 percent of the world's population, or 736 million people, live below the poverty line, with a daily per capita income of less than \$1.90. According to the United Nations Development Program (UNDP) 2018 survey data, if inequality and deprivation in healthcare access, education, and standard of living are considered instead of just income, it is revealed that 1.3 billion people worldwide are victims of multidimensional poverty. Currently, the increasing number of refugees resulting from man-made injustice, unfairness, and aggression is raising the global poverty rate. Internal inequality and injustice within a country create opportunities for aggression. Aggression tramples upon justice. World Bank international poverty lines (\$1.90 per day for low-income countries, \$3.20 for lower-middle-income countries, \$5.50 for upper-middle-income countries, and \$21.70 for high-income countries).¹

Due to war and aggression, 117 million people worldwide are displaced, including 42.5 million registered refugees, a vast population living in poverty as victims of political injustice who would not be among the impoverished if political fairness existed. Justice is not merely about trials and dispute resolution; inequality is deeply linked to the access to justice, which can eliminate disparity because, firstly, equal access leads to the equitable distribution of outcomes; secondly, justice acts as a level playing field that ignores arbitrary differences to provide consistent results for similar cases, creating opportunities and fostering trust in a fair society; and thirdly, the principles of equity and need in distributive justice have impacts that lead toward true equality. (Source: Hiil Report 2021).

¹ Authors: Dr. Martin Gramatikov, Rupinder Kaur, Isabella Banks, Dr. Kavita Heijstek-Ziemann, The Hague Institute for Innovation of Law Poverty and Access to Justice (Hiil) 2021 www.hiil.org.

Table 1. Global Refugee Statistics (2025-26) by Country

Country of Origin	Number of Refugees (Million)	Primary Cause of Displacement
Syria	6.5	Civil War & Conflict
Afghanistan	6.1	Political Instability & Human Rights.
South Sudan	2.3	Internal Violence & Famine
Myanmar	1.2	Ethnic Cleansing & military Aggression
Ukraine	5.8	invasion & War
Others	20.6	Global Conflicts & Injustice
Total Registered	42.5	

Source: UNHCR. (2024). *Global Trends: Forced Displacement in 2023-2024*. United Nations High Commissioner for Refugees.

Empirical Evidence: Justice Scores and Regime Stability

The sustainability of a political regime is intrinsically linked to its performance across key governance metrics. The study utilizes the Rule of Law Index, which evaluates eight critical factors: Constraints on Government Powers, Absence of Corruption, Open Government, Fundamental Rights, Order and Security, Regulatory Enforcement, Civil Justice, and Criminal Justice. An analysis of 37 historical and contemporary cases of regime change between 1917 and 2024 reveals a significant correlation between a low Justice Score (JS) and political instability. As summarized below (detailed in Appendix A), every government analyzed that was ousted through mass uprisings, coups, or institutional failure had a Justice Score below 0.50.

Statistical Summary of Evaluated Regimes (N = 37)

Indicator	Observed Findings
Total Sample Size	37 Regimes
Justice Score Range	0.10 to 0.49
Average Score Threshold	<0.50

Primary Data Sources: World Justice Project (2006-2024) & Historical Archives.

Data Interpretation

The empirical data support the hypothesis that a Justice Score below the 0.50 threshold serves as a critical indicator of systemic vulnerability. Unlike stable democracies, which typically maintain scores above 0.70, these 37 nations failed to uphold fundamental principles of administrative justice, leading to a breakdown of the social contract. This quantitative evidence validates the proposed Justice Model as a tool for predicting long-term national stability. (See Appendix A).

Objectives

The objective of this research is to maximize human well-being by eliminating poverty, deprivation, and discrimination. This research has identified the root causes of these problems and found ways to solve them, giving special importance to “justice” as a determining factor. The great Creator created man on this earth for two purposes. The first is that Allah says, “I have created the jinn and mankind only to worship Me” (Surah Az-Zariyat, verse: 56), and the second is that Allah says, “When you judge between people, judge with justice” (Surah An-Nisa, verse: 58). This concept of justice is not limited to resolving disputes; it applies to family, social, economic, national, and global matters. The study proposes that the head of any organization will act as a ‘processor’. Like a computer processor, it operates on a binary system. Binary relationships are observed throughout economics and sociology. In this framework, loss or destruction is symbolized by 0 (zero), and prosperity or complete development is symbolized by 1 (100%). In economics, behavioral satisfaction is both qualitative and mathematical. The analysis of this study’s data shows that the lack of justice leads to government instability. In a country, institutional poverty is often experienced when spending is less than 50% of GDP. This study introduces the concept of a “development score” based on the World Justice Project’s 0-1 score. A score below 50% on the “development score” indicates that a country is underdeveloped. Other things being equal, the development and justice scores serve as indicators of poverty, regime change, inequality, and the rise of authoritarianism. The term ‘binary’ has been used before by economists such as Amartya Sen, J.M. Keynes, and the Hill Report; this study shows how a ruler can maximize welfare in an economy by applying a binary system to the way a processor produces output.

Literature Review

The theoretical basis of this study integrates classical political philosophy with modern welfare economics to define justice as a measurable economic driver. Ibn Khaldun (1332-1406 AD) argued in his book ‘Al-Muqaddimah’ that injustice is the main cause of the destruction of civilization. He described a causal relationship in which the level of justice determines motivation for human labor and economic initiative. Professor Amartya Sen has emphasized that state intervention through appropriate government policies is necessary to ensure justice. His analysis of equitable distribution and duality provides a framework for administering justice in the economic system. Furthermore, J.M. Keynes argued that government spending can increase public welfare if managed through effective government policies. The ‘rule of law’ acts as an important mediator of economic activity.

The decline of administrative justice creates systemic weaknesses, where rising income inequality and inflation create a self-perpetuating cycle of inequality.

Research by Dimitri Lorenzani and Federico Lucidi suggests that civil justice reforms accelerate economic growth by attracting foreign direct investment (FDI) and increasing business dynamism. There is a link between poverty and the economy, as shown by the Hill Report. But research shows that as the Justice Score increases, the Development Score also increases. OLS reports, P values, and R-squared means have been proven. Professor Amartya Sen, as the originator of the Capability Approach, argues that equality is not simply the equal distribution of wealth or utility; rather, economic justice is about ensuring that individuals have the basic capabilities and real freedoms they need to live the lives they value.

In this framework, the focus is on how effectively an individual can use education, healthcare, and other opportunities to improve his or her standard of living; this concept is highly relevant to the formulation of a Justice Score. Rawls's seminal work, 'A Theory of Justice,' has profoundly influenced the 'distributive justice' of economics. He proposed the maximin principle, which holds that the greatest benefit should be given to the most disadvantaged members of a just society. Vilfredo Pareto (1948-1923) spoke of social welfare. The founder of Islam, Hazrat Muhammad (PBUH), born in 570 AD, established an economic system that ensured social welfare throughout his 63-year life. Amartya Sen's theory of the death of social welfare then raises questions.

Shah Sahib (born 1704 AD) (R) mentioned in the book Hujjatullah Baligha, The founder of the Qur'an has said about economic justice, "The historical reality says that at the time of the Prophethood of Muhammad (peace be upon him), the Persian and Roman empires were at the peak of development, but due to lack of economic justice, their roots are gradually becoming empty. [2] "Hobbes said that without a sovereign state, it is not possible to say anything coherently about fairness.

Research Methodology

This study focuses on achieving economic development through qualitative transformations, specifically by establishing justice through freedom from hunger, aggression, and blockades; eradicating unemployment and corruption; monitoring markets; ensuring banking sector independence; shifting political philosophy; and promoting interest-free banking and production incentives to eliminate inequality. As this research seeks to develop a new theoretical framework for problem-solving, it is classified as Fundamental Research, yet it also qualifies as Applied Research given its goal of fostering societal, national, and global progress. The objective is to use this methodology to mitigate political instability and inequality, steering toward sustainable development in which economic, political, and social welfare are integrated. The research demonstrates that the global shift from capitalist and socialist systems toward

mixed economies validates this proposed method, showing that establishing justice increases the Development Score, which, in turn, elevates various economic indicators through a multiplier effect. By using secondary data from the World Justice Project and GDP records, the application of a multiplicative methodology has been instrumental in ensuring data reliability and achieving positive analytical outcomes.

1. The Mathematical Framework

The research demonstrates that establishing justice increases the Development Score (DS), which, in turn, elevates various economic indicators through a multiplier effect. The relationship is expressed as:

$$DS=I \times JS$$

Where:

- DS (Development Score): The actualized state of sustainable development ($0 \leq DS \leq 1$).
- I = (Input Variable): Normalized value representing GDP expenditure and resources.
- JS (Justice Score): The multiplier derived from the World Justice Project (WJP) index $0 \leq JS \leq 1$

2. Data Application

By utilizing secondary data from the World Justice Project and GDP records, the application of a multiplicative methodology has been instrumental in ensuring data reliability. For example, the model compares the stability of Denmark ($JS = 0.90$) with that of countries with systemic justice deficiencies ($JS < 0.50$), validating the global shift toward justice-centered mixed economies.

Research Questionnaire

This study raises some questions. It also answers some questions. The question may be whether justice has any relation to economics. Justice is not just about dispute resolution. It is clearly related to equitable distribution. Poor people cannot afford to pay enough to get justice. The Hill Report has shown the relationship with poverty in this regard. Is justice related to welfare? Justice plays an important role in ensuring that deprived people receive what they deserve. Economic justice can address the distribution of wealth.

Justice Score in Developed and Developing Countries

The World Justice Project Rule of Law Index 2023 is pleased to present the latest edition, enabling a wide variety of stakeholders to identify rule-of-law strengths, weaknesses, progress, and setbacks across 142 countries and jurisdictions. The Index offers original, independent data organized into eight

factors that encompass the rule of law: Constraints on Government Powers, Absence of Corruption, Open Government, Fundamental Rights, Order and Security, Regulatory Enforcement, Civil Justice, and Criminal Justice. Scores range from 0 to 1, with 1 indicating the strongest adherence to the rule of law.

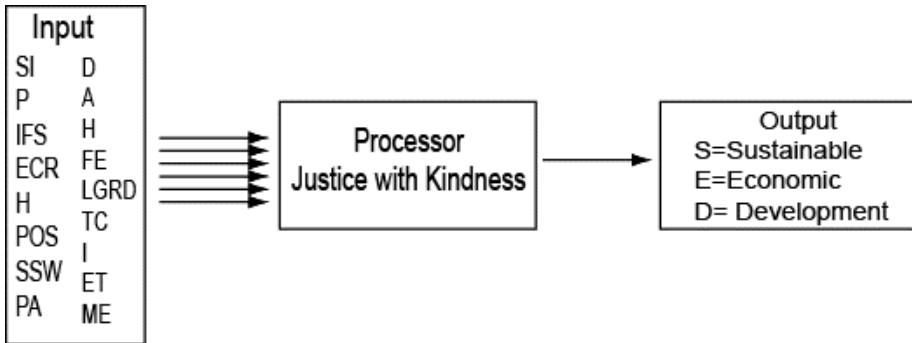
Table 2. Justices’ Score Developed and Developing Country

Developed Country			Developing Country		
Country/ Jurisdiction	Overall Score	Global Rank	Country/ Jurisdiction	Overall Score	Global Rank
Denmark	0.90	1	Honduras	0.41	119
Norway	0.89	2	Nigeria	0.41	120
Finland	0.87	3	Mali	0.40	121
Sweden	0.85	4	Congo. Rep	0.40	122
Germany	0.83	5	Zimbabwe	0.40	123
Luxembourg	0.83	6	Gabon	0.39	124
Netherlands	0.83	7	Uganda	0.39	125
New Zealand	0.83	8	Iran	0.39	126
Estonia	0.82	9	Bangladesh	0.38	127
Ireland	0.81	10	Mozambique	0.38	128

Table 2 shows the Justice Scores for 10 developed and 10 developing countries, based on the World Justice Project Rule of Law Index 2023. The Justice Score of developed countries is above 0.50, while that of developing countries remains below 0.50; this low Justice Score indicates poverty, labor unrest, the fall of governments, and the rise of autocrats. Ref: World Justice Score Rule of Law Index: 2023 Developed and developing countries.

Block Diagram Analysis

In the context of Bangladesh’s budget, the sectors of expenditure are considered as ‘Input,’ the Head of State as the ‘Processor,’ and sustainable economic development as the ‘Output.’ This conceptual framework is modeled after the functional process of a computer processor. The processing method can be shown in the form of a block diagram:



Development Score

$$= f(SI, P, IFS, ECR, H, POS, SSW, PA, D, A, H, FE, LGRD, TC, I, ET, ME) \times Js = SED$$

Figure 1. Block Diagram of Processing Methods

The block diagram shows that sustainable development will be possible if the input elements are processed with justice. The 17 budget components are presented briefly as inputs, which are then processed by the Processor. The resulting output is Sustainable Economic Development. This is a conceptual diagram where the state or the head of society is envisioned as the Processor, responsible for ensuring Justice within the system. Input: The input unit provides instructions to the computer for solving specific problems, along with the necessary data to execute them. This unit receives data and programs from various media, converts them into electrical signals, and stores them in the computer's memory. In other words, devices or components that provide instructions or information to the computer are called input devices. Output: After the input is provided, the computer processes the data and presents various types of information in a human-understandable format. The devices that produce these results are known as output units or components. Any device that allows the computer to provide results is called an output or emission device. Processing: Generally, the internal hardware within the system unit (computer casing) is referred to as processing hardware. These hardware components are directly or indirectly involved in data processing.

Justice
Project Rule of Law Index of Bangladesh (Ref: World Justice Project-2023)

Overall Score	Regional Rank (South Asia)	Income Rank (Lower Middle)	Global Rank
0.38	4/6	28/37	127/142

Table 3. Bangladesh Category 8 on the Justice Report

	Factor Score	Score change	Regional Rank (South Asia)	Income Rank (Lower Middle)	Global Rank
Constrains on Government Power	0.37	0.00	5/6	26/37	120/142
Absence of Corruption	0.33	-0.01	4/6	23/37	117/142
Open Government	0.40	0.00	5/6	21/37	106/142
Fundamental Rights	0.20	-0.01	5/6	34/37	137/142
Order and Security	0.63	0.00	4/6	25/37	108/142
Regulatory Enforcement	0.38	-0.01	4/6	30/37	126/142
Civil Justice	0.36	-0.01	5/6	32/37	133/142
Criminal Justice	0.30	-0.02	5/6	28/37	123/142

According to the revised budget, the total expenditure target for the financial year 2022-23 has been estimated at Tk 660507 crore, which is 14.8 percent of GDP. Of this, operating expenditure is Tk 4,329.42 crore (9.7% of GDP), and development expenditure is Tk 227,566 crore (5.1% of GDP). According to provisional estimates, iBAS++ shows that the total expenditure up to March 2023 for the financial year 2022-23 was Tk 300,820 crore, with operating expenditure of Tk 227,987 crore and development expenditure of Tk 62,105 crore. Source: Bangladesh Economic Survey 2023. There are 17 expenditure sectors in Bangladesh’s budget. Source: Budget Sahajapath, FY 2022-2023, Publisher Development Coordination.

Table 4. GDP Item 17

SL No.	Input Element	Compressed	Ratio
1	Subsidies & Incentives	SI	5.80
2	Pension	P	4.70
3	Industrial and Financial Services	IFS	0.70
4	Entertainment, Culture & Religion	ECR	0.80
5	Housing	H	1.10
6	Public Order and Security	POS	4.70
7	Social Security and Welfare	SSW	5.00
8	Public Administration	PA	7.60
9	Defense	D	5.50
10	Agricultural	A	3.60
11	Health	H	5.40
12	Fuel & Electricity	FE	4.60
13	Local Government and Rural Development	LGRD	7.00
14	Transport & Connectivity	TC	11.70
15	Interest	I	11.40
16	Education & Technology	ET	15.70
17	Miscellaneous Expenses	ME	4.70
Total =			100 %

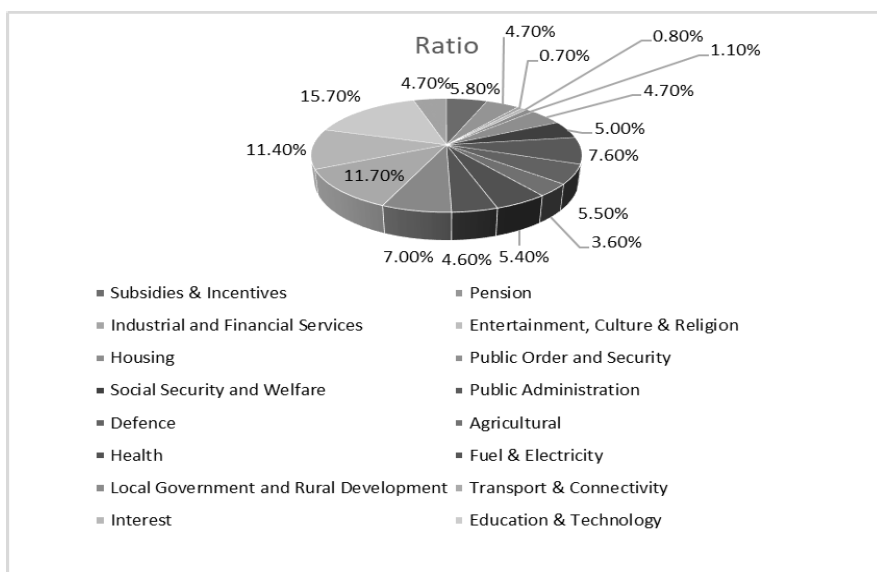


Chart 1. GDP Expenditure in Pie Chart

Obtaining the Development Score

The reason for using the averaging formula here is to derive a score by multiplying the Justice Mean Value by the budget expenditure as a percentage

of GDP, which is 14.8%. I have named this the ‘Development Score.’ This score is calculated by applying statistical averaging and regression formulas to the mean Justice Scores of various countries and their respective budget-to-GDP percentages. An analysis of this development metric suggests that countries with a score below 50% remain trapped in poverty. Furthermore, when the mean Justice Score falls below 50%, it creates conditions leading to political instability and the eventual fall of governments.

Rule: Formula for Average Explain

Development Score

$$= f(SI, P, IFS, ECR, H, POS, SSW, PA, D, A, H, FE, LGRD, TC, I, ET, ME) \times Js = SED$$

$$= f(x_1, x_2, x_{13} \dots \dots \dots x_n \times Js \dots \dots \dots (1)$$

$$= \sum_i^n x Js$$

Σx: (Expenditure Sector/ Input) Represented by the mathematical symbol x. This is the sum of all expenditure sectors. (Table-4)

- Value x =14.8% (Note: This is the simplified sum of 17 different components. (Table-4)

Number of Items (n): Represented by the symbol n. This indicates the total count of elements or sectors being measured.

- Value: n = 17

Justice Score (J): Represented by the symbol J. This is the resulting metric or index value.

- Value: J = 0.38 (WJP 2023)

Index (i): This serves as the counter for the elements, ranging from 1 to n.

Where

- Score: Represents the calculated Average.
- Σ: The Greek capital letter Sigma, which denotes Summation (The total sum of all elements)
- Elements: Represents the value of the “i” the element (or input).
- I = 1,2,3.....n: The index or counter for each element in the set.
- n: The Number of Elements / Input the set.

Variable Meaning

n	:	Number of Elements / Input
i	:	1,2,3.....n, (Index for summation)
Σ	:	Summation (Sum of all inputs)
Js	:	Justice Score (Related to Ihasan =(Kindness K hide)- This suggests the score might be influenced or weighted by a “Justice Score” or that “Justice Score” is the resulting “Score”.
Development Score	:	DS - This could imply a specific type of average or calculation method beyond the simple arithmetic mean (e.g., weighted average, geometric mean, etc.).

The two conditions place constraints on the resulting score values

1. Justice Score (Js) Constraint

$$0 \leq Js \leq 1$$

Explanation: This means the Justice Score (Js) must be a value between zero (0) and one (1), inclusive. This is common when a score is normalized (scaled) to be a fraction or a percentage (where 1 represents 100%).

2. Average Input Constraint: $0 < \text{Average of the Input} \leq 1$

Explanation: This means the final calculated Average Score must be greater than Zero (0) and equal to or less than one (1). The inputs themselves or the final average are constrained to this range, implying that the inputs are likely already normalized values (e.g., probability, satisfaction rating out of 1, etc.).

The core rule is the Formula for Average, the accompanying variables and conditions define a Specific model where the average is referred to as a “Score” (possible a “Justice Score”), the input is recessed via a “PM” (Processing Method), and both the score and its components are constrained to be within the range (0, 1) (or (0, 1) for the Justice Score).

Data Analysis

The Impact of Justice Scores in 34 Countries Across the World

In a study of 142 countries, it was found that 78 nations maintain a Justice Score of 50% or higher, while 64 countries—including Bangladesh, India, Sri Lanka, Mexico, Thailand, and various other developing or underdeveloped nations—fall below this threshold. This low Justice Score is identified as a primary catalyst of political instability and the rise of authoritarianism, in contrast to high-scoring nations like Denmark, where robust justice systems

drive high development. The validity of this methodology is evidenced by the fact that 35 heads of state have recently resigned following mass uprisings against systemic inequality in countries where low Justice Scores have long served as a precursor to poor development outcomes and social unrest.

Comparative Analysis of Budget Expenditure as a % of GDP over the Last 5 Years: 9 Developing Nations vs. 1 Developed Nation

This analysis compares nine developing countries—including Bangladesh, India, Sri Lanka, Nepal, and Thailand—with Denmark, which stands at the peak of the development index. Currently, the budget expenditure as a percentage of GDP in these developing nations is only one-third that of Denmark. The data suggests that if these nations can improve their Justice Scores, they can achieve developed status even with their existing budget allocations.

Table 5. Expenditure as a percentage of GDP: 10 Countries.

Country	2020	2021	2022	2023	2024 (Estimated)
Bangladesh	13.3%	13.0%	13.1%	14.8%	14.3%
Denmark	53.9%	50.8%	46.3%	47.9%	47.4%
India	29.7%	30.4%	28.5%	28.7%	28.4%
Sri Lanka	19.3%	20.3%	18.6%	19.5%	19.3%
Nepal	27.2%	26.7%	26.3%	25.1%	22.1%
Thailand	25.4%	26.9%	25.7%	22.8%	23.1%
Egypt	26.6%	25.9%	21.4%	21..7%	24.7%
Libya	70.5%	64.7%	62.2%	65.4%	94.8%
Yemen	15.1%	14.1%	15.6%	15.3%	8.9%
Iran	18.5%	19.0%	18.1%	16.4%	14.2%

Source: IMF World Economic Outlook Database 10 Countries

The percentage of GDP a country spends reflects its level of development. In developed nations, the total expenditure-to-GDP ratio is typically above 50%, with Libya the only exception.

Economic growth (GDP) does not guarantee social stability in the absence of political and social justice. Example: Libya.

Table 6. 1994-2017 GDP Expenditure. (Bangladesh).

Fiscal Year	Total Expenditure (% of GDP)
1994-1995	14.43%
1999-2000	14.54%
2000-2001	14.75%
2004-2005	14.54%
2005-2006	14.20%
2006-2007	14.30%
2007-2008	17.48%
2008-2009	15.31%
2009-2010	13.09%
2010-2011	13.59%

The following data illustrates the total expenditure-to-GDP ratio for Bangladesh spanning 10 years from 1994-2011

Sources: IMED, Ministry of Planning; Finance Division, Ministry of Finance; The National Financial System 1995–2008, Principal Zahirul Islam Shikder, Confidence Publications, 2011, Page 146.

Even if total expenditure is below 50% of GDP, the country still lacks political stability.

Data Analysis of Various Countries

An analysis of the Justice Scores of countries, including Iran, Yemen, Libya, Egypt, Bangladesh, Sri Lanka, Uganda, Nepal, Mexico, the Philippines, and Syria, over at least the past ten years reveals that while Sri Lanka and Libya maintain a Justice Score around 50%, the remaining nations fall below this threshold. In this study, the comparison between the Justice Scores of Bangladesh and Denmark yields a specific value, the Development Score. Furthermore, when evaluating GDP data, it becomes evident that a low rate of GDP expenditure is a primary characteristic of underdeveloped nations. Iran, Yemen, Libya, Egypt, Bangladesh, Uganda, Nepal. Average Justice Score >50 from 2015 to 2024. These countries are underdeveloped, and political power changes are noticeable. The Justice Score status of these three countries is at a minimum. The average Justice Score for Sri Lanka over the past ten years has been at or near 50%. While a government instability did occur in Sri Lanka, it is believed that political stability was restored very quickly because the average Justice Score remained at the 50% threshold. (Appendix: B), Syria's Justice Score is -2.5, the Philippines' Justice Score is 0.46, and Venezuela's is 0.26. These low Justice Scores indicate that these countries lack good governance, face corruption and inequality, and experience low GDP growth rates, making

it almost impossible to overcome economic hardship and achieve sustainable development without ensuring justice. This supports this model.

Justice Score: An Indicator for Ensuring Human Development and Sustainable Growth

To support the Justice Score and long-term budgetary expenditure, it is necessary to strengthen the foundations of human development and the economy. The Human Development Index (HDI), including health, education, and standard of living, must be improved, as an educated and healthy workforce is the primary driver of rapid development. Public expenditure on education as a percentage of GDP must be increased (which is currently relatively low). This investment will enhance future productivity.

Apply The Formula of Average

To calculate the Economic Development Score from the Justice Score (comparing Bangladesh and Denmark), we apply the following average formula:

$$= \sum_i^n x \text{ Js (Following the formula for average)}$$

In the case of Bangladesh —

Here,

GDP Expenditure Sectors: $x=14.8\%$, (GDP%), $n = 17$, $J_s = 0.38$

Then,

Development Score

$$\begin{aligned} &= \sum_i^n x \text{ Js} \\ &= \frac{x}{n} \times J_s \\ &= \frac{14.8}{17} \times 0.38 \\ &= 87.05'0.38 \\ &= 0.3308 \\ &= 33.08\%: \text{Which is less than } 50\% \\ &= \text{Developing Country (Lower middle GDP per Capita)} \end{aligned}$$

The Development Score functions like a thermometer; it can indicate the temperature, but cannot reduce it. A government, acting like a doctor, must take the necessary measures to lower the temperature. Similarly, while the Development Score illustrates the current state of progress, the government must function like a processor to implement the systems required for advancement. In this model, GDP expenditure is held constant, with Justice

as the independent variable. As Justice increases, the Development Score rises accordingly. Greater justice leads to reduced inequality and the eradication of poverty, ultimately resulting in national development. Although Justice is not the sole variable for development—as education, agricultural and industrial production, investment, and trade are also vital—it significantly influences every other factor. Here, Justice is not merely a tool for dispute resolution but a foundational pillar. If Denmark’s level of Justice were applied to Bangladesh, the nation would transform into a developed country. Even without changing other economic components, increasing Justice alone can drive development, though enhancing those other factors alongside it would yield even better results.

Applying Denmark’s Justice Score (0.90) while keeping the same input for Bangladesh

Here,

Expenditure Components of GDP $x=14.8\%$, (GDP%), $n=17$, $J=0.9$ (Denmark)

Then,

$$\begin{aligned}\text{Development Score} &= \frac{14.8}{17} \times 0.90 \\ &= 0.84.05 \times 0.90 \\ &= 78.35\%\end{aligned}$$

Which is Greater than 50% = Developed (Upper middle GDP per Capita)

Result: It makes development.

Even without increasing expenditure, simply raising the level of justice raises the development score. This indicates a score of 78.35%.

By applying Denmark’s GDP expenditure (47.9%) while keeping the Justice Score the same (0.38) and maintaining Bangladesh’s input, the result is:

$$\begin{aligned}\text{Development Score} &= \frac{47.9}{17} \times 0.38 \\ &= 2.817 \times 0.38 \\ &= 1.0707\end{aligned}$$

In the context of India:

$$\begin{aligned}\text{Development Score} &= \frac{28.7}{10} \times 0.50 \\ &= 2.87 \times 0.50 \\ &= 1.435\end{aligned}$$

In the context of Denmark: Denmark’s 10 Expenditure Sectors

Denmark categorizes its budget into ten specific categories: social protection, health, public services, education, economic affairs, defense, recreation and culture, public order and safety, environmental protection, and housing.

Using Denmark’s Justice Score of 0.9, we find—

$$\begin{aligned} \text{Development Score} &= \frac{47.9}{10} \times 0.90 \\ &= 4.79 \times 0.90 \\ &= 4.311 \end{aligned}$$

Regression and Analysis of Results: Evidence of development scores

OLS regression results in Table 7 show the determinants of the development score. The results were generated using STATA Software.

Table 7. OLS Regression Results: Determinants of Development Score.

Dependent Variable: Development Score	(1)
Justice Score	0.0165*** (0.0013)
GDP	0.0377*** (0.0020)
Constant	-0.0092*** (0.0005)
Observations	48
R-squared	0.9810
Adjusted R-squared	0.9802
Residual Std. Error	0.0012 (df = 45)
F Statistic	1162.480*** (df = 2; 45)

***p < 0.001; **p < 0.01; *p < 0.05

Note: Standard Errors are Reported in Parentheses below Coefficients

The regression results show that both justice and GDP have a statistically significant positive impact on development scores. Specifically, a one-unit increase in the Justice Score is associated with a 0.0165-unit increase in Development Score (p < 0.001), holding GDP constant. GDP has a larger effect, with a one-unit increase associated with a 0.0377-unit rise in Development Score. The model is highly robust, explaining 98.1% of the variance in development scores (R-squared = 0.9810), and the overall model fit is statistically significant (F(2, 45) = 1162.48, p < 0.001). With 48 observations, these findings provide strong evidence that justice independently contributes to development, even after accounting for economic output. By examining

the GDP and Justice Scores of 48 nations across Europe, Asia, Africa, South America, and Oceania, this research establishes that an improvement in the Justice Score significantly enhances the Development Score.

Denmark Vs Bangladesh

The core premise of this model is that a country's development score depends on its justice score. In statistical terms, this can be expressed through a simple linear regression model. The core thesis of this model is that a nation's Development Score (D) is fundamentally driven by its Justice Score (J), and the control variable of this analysis is GDP growth rate.

1. The Mathematical Formula

Equation: The relationship is expressed by the following linear equation:

$$D_i = \beta_0 + \beta_1 J_i + \beta_2 gdp_i + \epsilon_i$$

Intercept (β_0): This value shows what the development score would be if the justice score is zero. Based on the data analysis of this model, this value is assumed to be approximately zero (≈ 0)

Error Term (β_0): This term represents all other factors that lie outside the model's explanation. From the data, this has also been found to be nearly zero (≈ 0) as the calculations align almost perfectly.

2. Coefficient Calculation and Result

- **Coefficient or Slope (β_1):** This indicates the rate of change in Development Score for every unit change in Justice Score. From the ratio of the data for Bangladesh and Denmark (Development Score / Justice Score), the coefficient is approximately 0.7835.
- **Final Equation:** By substituting these values, the obtained final regression equation is: $D = 0.7835 \times J$

Observation: Plugging in $J=0.38$ for Bangladesh, the model predicts that $D = 0.7835 \times 0.38 \approx 0.2988$, which is close to the model's 0.3308. Plugging in $J=0.90$ for Denmark, the model predicts that $D = 0.7835 \times 0.90 = 0.7051$, which is close to 0.7051.

Statistical Interpretation

- **Impact of Justice Score:** The obtained coefficient of 0.7051 indicates that, holding all other factors constant, if the Justice Score increases by 1 unit, the Development Score will increase by approximately 0.7051 units.
- **Significance:** This high and positive coefficient proves that, according to this model, justice is a strong positive predictor of the Development Score. In other words, the lion's share of the reason why a country's development

score increases or decreases can be explained solely by the variance in the Justice Score.

This analysis provides statistical support for the core policy claim that good governance and economic justice are the most crucial drivers of a country's stable and sustainable development.

Application of Regression Model (Justice Score and Development Score) for India

Based on this Justice Score, a prediction for the Development Score for India can be generated. For this analysis, we use the coefficient from the previously obtained regression model. The prediction for India's Development Score will be provided based on the simple regression model developed in the prior analysis:

$$D = 0.7835 \times J$$

Where D is the Development Score, and J is the Justice Score. According to the latest World Justice Project (WJP) Rule of Law Index 2024, India's Justice Score (J) is 0.50 (Note: Bangladesh ranks 127th with a score of 0.39, while India ranks 79th with a score of 0.50).

We will generate the prediction using the obtained coefficient of 0.7835 and India's J = 0.50 value:

$$\begin{aligned} \text{Development Score} &= 0.7835 \times J \\ &= 0.7835 \times 0.50 \\ &= 0.3917 \end{aligned}$$

Result and Interpretation:

Development Score: 0.3917 Or 39.17%

According to this model's criteria, countries with a score below 50% are classified as developing nations. Based on that, India would be classified as a developing country in this model. These results indicate that, in this model, India falls between Denmark (78.35%) and Bangladesh (33.08%). Since India's Justice Score (0.50) is higher than Bangladesh's (0.38), India's development score is higher than Bangladesh's even when using the same amount of input (expenditure). This prediction reinforces the model's core argument—whether a country is considered developed ultimately depends on the level of justice and good governance, as measured by my Justice Score.

Limitations of the Study

While this research provides significant insights into the relationship between

justice and development, it is subject to several limitations. First, reliance on secondary data sources may limit the precision of the results, as data quality can vary across developing nations. Second, although the “Justice Score” is a robust conceptual framework, quantifying subjective social and moral values remains inherently complex and may be influenced by regional cultural perspectives. Third, the study focuses primarily on economic and political variables, potentially overlooking other external factors such as global environmental changes or technological disruptions. Finally, the findings are specific to a given timeframe; thus, a longitudinal study would be necessary to further validate the long-term sustainability of the Justice Multiplier model across different historical cycles. Dominique Lapierre’s observation in his book *The City of Joy* is profoundly significant: whatever human morality may dictate, in a land where hunger is the sole emotion and quenching the burning fire of the stomach is the primary practiced religion, upholding the pinnacles of moral idealism is itself a cruel injustice.

Conclusion

True economic development and social peace are achieved only when income and wealth are distributed fairly and equitably. This principle applies to individuals, societies, states, and international organizations. No matter how high the growth rate, if income is not distributed justly, it will not benefit the common people. Just as a digital processor handles data, an administrator, like a processor, fairly allocates the GDP input. As a result, growing inequality breeds public discontent, which inevitably creates institutional instability rather than sustainable growth. Just as a leaky pot can never be filled, chaotic distribution, no matter how much wealth there is, does not bring about lasting progress. Moreover, a system plagued by corruption or structural poverty cannot be expected to achieve equitable distribution. In this framework, an administrator, like a processor, is tasked with fairly allocating the GDP input. Therefore, just distribution is equitable distribution. This study, titled “Justice and Development Score: A Multivariate Modeling Analysis of Poverty Alleviation and Political Stability”, uses binary logic, the arithmetic mean, and statistical regression to demonstrate that justice is a critical factor in poverty alleviation. The results are twofold: First, a Justice Score (JS) below 50% consistently limits the Development Score (DS) to below 50%. Second, increasing the Justice Score is a fundamental prerequisite for a stable and developed society. Developing countries can move toward prosperity more effectively by improving their Justice Score rather than simply increasing GDP expenditure. Justice serves as both a moral guide and a leading indicator of well-being. Therefore, ensuring distributive justice is the cornerstone of long-term political stability and sustainable global development. Based on my 2023 research across 48 countries, I find that as the Justice Score increases, the Development Score also increases. I used GDP growth as a control variable.

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Appendix A

Table 2: List of the Head of Government, country, resignation date, and justice Score

A	B	C	D	E	F
No.	Name	Country	Cause of Fall	Date of Fall	Justice Score
1	Sheikh Hasina	Bangladesh	Student-People Mass Uprising	August 5, 2024	0.38
2	Bashar al-Assad	Syria	Armed Rebellion & Fall of Capital	December 8, 2024	0.2
3	Gotabaya Rajapaksa	Sri Lanka	Economic Crisis & Mass Uprising	July 14, 2022	0.49
4	Ashraf Ghani	Afghanistan	Taliban Capture of Kabul	August 15, 2021	0.33
5	Omar al-Bashir	Sudan	Military Coup & Mass Protests	April 11, 2019	0.35
6	Robert Mugabe	Zimbabwe	Military Coup	November 21, 2017	0.36
7	Blaise Compaoré	Burkina Faso	Mass Uprising	October 31, 2014	0.42
8	Viktor Yanukovich	Ukraine	Maidan Revolution (Uprising)	February 22, 2014	0.45
9	Muammar Gaddafi	Libya	Civil War & NATO Intervention	October 20, 2011	0.21
10	Ali Abdullah Saleh	Yemen	Arab Spring & Resignation	February 27, 2012	0.35
11	Hosni Mubarak	Egypt	Mass Uprising (Arab Spring)	February 11, 2011	0.39
12	Zine El Abidine Ben Ali	Tunisia	Jasmine Revolution	January 14, 2011	0.46
13	Saddam Hussein	Iraq	US Invasion & Government Collapse	April 9, 2003	0.24
14	Slobodan Milošević	Serbia	Bulldozer Revolution	October 5, 2000	0.33
15	Mobutu Sese Seko	Congo (Zaire)	Civil War & Rebellion	May 16, 1997	0.27
16	Suharto	Indonesia	Student Protests & Economic Recession	May 21, 1998	0.32
17	H. M. Ershad	Bangladesh	Student-People Mass Uprising	December 6, 1990	0.35
18	Nicolae Ceaușescu	Romania	Mass Rebellion & Execution	December 25, 1989	0.3
19	Ferdinand Marcos	Philippines	People Power Movement	February 25, 1986	0.34
20	Idi Amin	Uganda	Tanzanian Invasion & Rebellion	April 11, 1979	0.25
21	Mohammad Reza Pahlavi	Iran	Islamic Revolution	February 11, 1979	0.37
22	Pol Pot	Cambodia	Vietnamese Invasion & Fall	January 7, 1979	0.15
23	Sheikh Mujibur Rahman	Bangladesh	Military Coup & Assassination	August 15, 1975	0.3
24	King Farouk	Egypt	Military Coup	July 26, 1952	0.4
25	Adolf Hitler	Germany	Defeat in World War II	April 30, 1945	0.1
26	Tsar Nicholas II	Russia	Bolshevik Revolution	March 15, 1917	0.25
27	Blaise Compaoré	Burkina Faso	Uprising & Seizure of Parliament	October 31, 2014	0.42
28	Viktor Yanukovich	Ukraine	Euro-Maidan Revolution & Exile	February 22, 2014	0.45
29	Jean-Claude Duvalier	Haiti	Bloody Protests & Exile	February 7, 1986	0.25
30	Manuel Noriega	Panama	US Military Intervention & Arrest	January 3, 1990	0.4
31	Alberto Fujimori	Peru	Corruption & Resignation via Fax	November 22, 2000	0.45
32	Evo Morales	Bolivia	Disputed Election & Mass Protests	November 10, 2019	0.38
33	Yahya Jammeh	Gambia	Electoral Loss & Regional Pressure	January 21, 2017	0.45
34	Mengistu Haile Mariam	Ethiopia	Capture of Capital by Rebels	May 21, 1991	0.28
35	Charles Taylor	Liberia	Civil War & International Pressure	August 11, 2003	0.22
36	Sukarno	Indonesia	Military Coup (by Gen. Suharto)	March 12, 1967	0.3
37	Mohammad Mossadegh	Iran	CIA-backed Military Coup	August 19, 1953	0.48

Sources: WJP 2006-2024 Report and newspaper.

Appendix B

Justice Score Sri Lanka: 2012–2024 (Past 12 Years)

Year	WJP Rule of Law Index (Score on a 0–1 scale)	World Ranking	Number of countries	Comments
2012-2013	Specific score not mentioned	High regional ranking.	97	
2014	0.62	48 Th	99	
2015	0.50	No specific ranking mentioned	102	
2016	0.51	„	102	
2017	0.53	„	113	
2018	0.53	„	113	
2019	0.52		126	Consolidated Report for 2018–19
2020	0.52	„	128	
2021	0.50	„	139	
2022	0.50	„	140	
2023	0.50	77th	142	
2024	0.51	75 th	142	2nd position in South Asia

