



Article

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Abstract

This research examines how the cost of living differs across various income categories in 24 Asian Muslim-majority countries. The study systematically compares living costs by classifying the selected countries into four distinct economic categories: low-income, lower-middle-income, upper-middle-income, and high-income. The cost of living is captured using seven price indices, including the Consumer Price Index, Food Price Index, Utilities Price Index, Health Price Index, Transport Price Index, Education Price Index, and Communication Price Index. Secondary data are sourced from the World Bank and the websites of the respective countries for an in-depth descriptive analysis on how income level and key price indices collectively shape the cost of living. The study highlights significant differences in price indices between income groups, with high-income countries exhibiting stable and predictable pricing trends due to robust infrastructure and efficient markets. In contrast, low-income countries face high volatility in essential sectors like food and transportation due to economic instability. Middle-income countries show transitional trends, with some stability in areas like health and education but ongoing challenges in basic needs, reflecting gradual economic transformations.

Keywords: Cost of Living, Asian Muslim-majority Countries, Income Level, Consumer Price Index, Food Price Index, Cost of Living Indices



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1. Introduction

The cost of living refers to the total amount of money required to maintain a specific standard of living in a given area, encompassing expenses for housing, transportation, healthcare, food, and other vital services. According to Konuş (1939), the actual cost of living index assesses the financial costs of various product combinations required to maintain a particular standard of living over time. Although the Cost-of-Living Index was developed in 1914 to limit salaries in reaction to price increases, more recent research has demonstrated that a more comprehensive assessment is necessary (Jones, 1941). Moreover, Narotzky and Martínez Álvarez (2023) define the cost of living as macro indicators of inflation, price discrepancies

between producers and consumers, and their impact on income and means of subsistence. Analysing the cost of living is crucial for evaluating economic well-being, as it impacts individuals' ability to cover essential needs and maintain a decent quality of life. Consumers may feel disempowered due to high living expenditures, prompting them to use individual and collective adaptation methods to regain control over their purchases (Pothin et al., 2022).

Worldwide, the cost of living has emerged as a significant issue driven by factors such as inflation, rising energy prices, and disruptions in supply chains. Rising inflation rates have pushed many individuals to make tough decisions regarding necessities due to supply chain disruptions caused by the COVID-19 pandemic, the climatic disaster, and the Russia-Ukraine conflict (The Lancet Planetary Health, 2022). Meanwhile, rising energy costs are causing increased food and energy poverty, worsening the crisis (UN Globe, 2022). These economic challenges have led to a global cost-of-living crisis, affecting households across various regions. Many countries have experienced a notable increase in the prices of essential goods and services, straining household budgets and increasing financial stress. Developed and developing nations have been advised to implement policies specific to their respective circumstances to lessen the effects of this ongoing catastrophe (UN Globe, 2022).

In Asia, a continent with diverse economic conditions and rapid growth, the cost-of-living crisis has had varying impacts on different countries. Yilmaz & Noyan (2023) assessed the cost of living in 44 Asian countries in 2023 using a weighted index that considered local purchasing power, rent, food expenses, restaurant pricing, and other factors. Singapore and Hong Kong were the top-ranked cities, with India finishing last. As the Asia region navigates economic shifts and deeper integration into the global economy, the consequences of rising living costs have become more apparent. For example, in Southeast Asia, the annual cost of malaria management ranges from \$0.11 to \$39.06 per capita, whereas the annual economic burden of dengue fever ranges from \$610 to \$1,384 million (Shah et al., 2020). This issue is particularly significant in Muslim-majority countries within Asia, which display a broad spectrum of economic conditions.

According to the World Bank (2023) report, the cost of living varies significantly across Asian Muslim-majority countries depending on their income level. In high-income countries like Saudi Arabia and Malaysia, the cost of living is generally higher due to greater purchasing power, developed infrastructure, and higher wages. In contrast, low-income countries such as Afghanistan, Syria, and Yemen tend to have a lower official cost of living, but high inflation and instability often reduce real affordability. Lower-middle-income countries like Pakistan, Bangladesh, and Indonesia experience moderate living costs, although urban areas may be significantly more expensive than rural regions. Income level is a major determinant of access to basic goods, services, and overall living conditions.

This study conducts a comparative analysis of cost of living (COL) variations across income categories in Muslim-majority Asian countries by examining key price indices: consumer price index, food price index, utility price index, transportation price index, education price index, communication price index, and health price index. These metrics describe fundamental spending behaviours that affect family affordability (World Bank, 2023). Although these countries share similar religious beliefs and cultural values, substantial economic disparities exist among them. Notably, low-income and lower-middle-income countries tend to experience greater

economic vulnerability. Therefore, this study examines how the sector-specific price indices (e.g., food, utilities, health, education, communication, and transport) vary across income levels in Asian Muslim-majority countries, and as a result, whether the living costs in lower to higher-income countries differ significantly. The study lays the foundation for systematically investigating living cost disparities throughout the region by defining these questions. Moreover, this study explores how the cost of living differs across these income categories and whether significant disparities exist despite their shared ideological foundations.

2. Literature Review

The cost of living can vary a lot based on where you live, and it is shaped by factors like the strength of the local economy, access to services, and what people earn. In richer countries, the cost of living is higher, but people tend to earn more and have better access to housing, healthcare, and public transportation. Headey et al. (2023) observe that food prices cause 3 billion people to not have a healthy diet, especially in low-income economies. In lower-income countries, living expenses are generally lower, but so are wages, which makes it harder to afford basic needs like food, housing, and medical care. Food is a big part of living costs and also varies widely. Wallingford et al. (2024) state that around 3 billion people globally cannot have a healthy diet due to high food prices and insufficient income in low-income countries. Bai et al. (2022) analysed food affordability worldwide, covering 172 countries. Their findings reveal that nutrient-dense diets, especially those rich in calcium, Iron, and vitamins, are unaffordable in many low-income countries. In addition, it is also claimed that essential nutrients like vitamins, proteins, and calcium are more expensive in low-income countries than in high-income countries (Mohammadi, 2024; Deptford et al., 2017). In richer countries, food is generally more affordable than people's income, while in poorer countries, basic groceries like rice, bread, or meat can take up a large part of a person's budget. Local farming, import taxes, and general inflation play a role in driving food prices. Also, they emphasise the need for intervention to improve food availability and social support to increase food affordability globally for better global nutrition (Wallingford et al., 2024).

This study integrates Konüs' Cost of Living Theory (1939), Giddens' Social Stratification (1991), and Thirlwall's Structural Inflation (1974) to comparatively analyse cost of living (COL) disparities across income categories in Muslim-majority Asian countries. Konüs' principle, defining COL as "the minimum expenditure required to maintain a fixed standard of living" (World Bank, 2023); provides the foundation for examining price indices (CPI, food, utilities, transportation, education, communication, and health) as proxies for household expenditure patterns, enabling descriptive cross-country comparisons of purchasing power disparities where sector-specific indices reveal inflation's differential impact on consumption baskets (IMF, 2022). Giddens' stratification lens contextualises income categories as social strata with distinct behaviours: lower-income households allocate >60% of expenditures to non-discretionary categories (food, utilities, health), making them acutely vulnerable to price volatility (UNDP, 2021), while higher-income groups absorb COL fluctuations through discretionary adjustments (ADB, 2023). Thirlwall's theory elucidates how structural imbalances, such as education costs rising 2.5× faster than CPI in Indonesia or health inflation outpacing wages in Pakistan (UNESCO, 2022), amplify disparities through region-specific drivers (FAO, 2023), subsidy-distorted utility costs (IEA, 2022), and digital access gaps (ITU, 2023), collectively shaping COL outcomes through institutional and sectoral specificities.

Transportation costs also change depending on where you live. Public transportation is often more developed but expensive in wealthier countries, especially in huge cities. Poor public transportation in developing countries often isolates low-income residents, leading to longer travel times, higher costs, and reduced access to opportunities (Castro et al., 2022). Moreover, the National Survey of Household Income and Expenditure (ENIGH, 2022) analyses transportation expenditures during 2018-2020, including car-related expenses such as gasoline, oil, and tires; the findings indicate that energy price increases significantly impact transportation costs, particularly for low-income households in developing countries. Many people rely on cars, which adds to expenses for fuel and maintenance. Adopting sustainable transportation requires a combination of strategies, from low-cost active transportation options to high-expense infrastructure projects such as metro systems (Santos et al., 2020). In lower-income countries, public transport is usually cheaper but less reliable, and owning a car can be a more significant financial burden due to lower wages. In addition, transportation costs and affordability in low-income countries are essential concerns, especially for struggling rural and urban communities (Iqbal, 2025; Venter, 2011).

Healthcare is another key part of the cost of living. In wealthier countries, healthcare is often supported by the government or insurance, which makes it easier to access, though some treatments and medications can still be costly. Despite having the highest healthcare spending in the world, the United States does not achieve significantly better health outcomes, suggesting that its current spending practices may be unsustainable (Nshi et al., 2022). In lower-income countries, healthcare is harder to access and can be extremely expensive, especially for serious illnesses. These findings imply that the standard cost-effectiveness measure of one GDP per capita could be too high, especially in low- to middle-income countries; this points to the urgent need for more thoughtful and tailored approaches to distributing healthcare resources effectively (Gloria et al., 2023). Limited infrastructure, fewer healthcare professionals, and a lack of funding mean many families must choose between medical care and other basic needs. By the way, the increasing number of older adults and their multiple health conditions are escalating healthcare costs, underscoring the necessity for improved access to health services through innovative technologies (Lopreite et al., 2023). As healthcare costs continue to rise globally due to aging populations and expensive treatments, it is becoming an even more significant challenge for families worldwide. In Bulgaria, the increase in healthcare costs is primarily driven by GDP growth, while the influences of population aging and hospitalization rates are minor (Mitkova et al., 2022).

In conclusion, many factors like the economy, access to services, and local wages influence the cost of living, creating noticeable gaps between rich and poor countries. Wealthy nations generally provide better housing, healthcare, and public transport, but they also face high food prices that can affect people's diets. On the other hand, low-income countries deal with low wages and rising costs for basic needs, making it challenging for families to get by. With healthcare costs rising, especially as populations age and transportation challenges isolate low-income communities, there is an urgent need for practical solutions. These issues must be tackled by making food more affordable, improving public transport, and ensuring everyone can access healthcare. Such efforts can work towards better living conditions for everyone, no matter where they live.

2.1 Economic Landscape of Asian Muslim Majority Countries

The economic landscape of Asian Muslim-majority countries spans a wide range, divided into low-income, lower-middle-income, upper-middle-income, and high-income categories. Low-income nations often face ongoing challenges like poverty, weak infrastructure, and low economic output. In lower-middle-income countries, economies are growing, but efforts to lift people out of poverty and improve living standards remain key priorities. Upper-middle-income nations tend to have more established industries and increasing prosperity. At the same time, high-income countries enjoy advanced infrastructure, elevated living standards, and substantial wealth, often driven by natural resources. These income levels are crucial in shaping their development paths, living costs, and policy directions.

World Bank (2022) data show low-income economies like Yemen, Syria, and Afghanistan face serious economic challenges, reflected in their low GDP per capita (see Table 1). Yemen, with a GDP of \$21.61 billion and a per capita income of just \$533.4, is struggling with political instability and widespread poverty. Syria, having a GDP of \$8.97 billion and a per capita income of \$421.1, is also dealing with economic hardships due to the ongoing conflict. With a GDP of \$14.24 billion and a per capita income of \$352.6, Afghanistan grapples with profound economic difficulties, mainly stemming from instability and insufficient infrastructure. These nations are impoverished, struggling with economic performance, and have underdeveloped industries.

Table 1
Low-Income Economics (1145 \$ or less)

Countries	GDP	GDP Per-Capita Income (USD)
Yemen	21.61 billion	533.4
Syrian	8.97 billion	421.1
Afghanistan	14.24 billion	352.6

Sources: World Bank (2022), Countries' GDP and GDP per capita income in (USD)

Table 2 shows that lower-middle-income countries such as Bangladesh, Tajikistan, and Pakistan display varying degrees of economic development and growth. With a GDP of \$460.2 billion and a per capita income of \$2,529, Bangladesh is making notable progress in several sectors. In contrast, Pakistan, which has a GDP of \$374.7 billion and a per capita income of \$1,407, continues to confront significant obstacles. Meanwhile, countries like Iran and Jordan benefit from higher per capita incomes of \$4,502.5 and \$4,482.1, respectively, enjoying the perks of more advanced industries yet still facing their economic challenges.

Table 2
Lower-Middle Income Economics (1146 \$ to 4515\$)

Countries	GDP	GDP Per-Capita Income (USD)
Bangladesh	460.2 billion	2529
Uzbekistan	80.32 billion	2496.1
Pakistan	374.7 billion	1407
Kyrgyzstan	11.54 billion	1969.9
Lebanon	23.13 billion	3350.3
Iran	413.49 billion	4502.5
Jordan	48.65 billion	4482.1

Sources: World Bank (2022), Countries' GDP and GDP per capita income in (USD)

Table 3 shows that upper-middle-income countries such as Azerbaijan, Indonesia, and Malaysia reflect good economic growth and development. With a GDP of \$78.72 billion and a per capita income of \$7,115, Azerbaijan capitalises on its abundant natural resources. In contrast, boasting a GDP of \$1.32 trillion and a per capita income of \$4,940.5, Indonesia is focused on diversifying its economic base. Meanwhile, nations like Kazakhstan and Turkey, which enjoy higher per capita incomes of \$13,136.6 and \$12,985.8, respectively, have robust industrial sectors but face various economic hurdles.

Table 3

Upper-Middle Income Economics (4516\$ to 14005 \$)

Countries	GDP	GDP Per-Capita Income (USD)
Azerbaijan	78.72 billion	7115
Indonesia	1.32 trillion	4940.5
Iraq	364.18 billion	5512.5
Kazakhstan	225.5 billion	13136.6
Malaysia	407.03 billion	11648.7
Maldives	6.17 billion	12667.4
Turkey	907.12 billion	12985.8

Sources: World Bank (2022), Countries' GDP and GDP per capita income in (USD)

Table 4 highlights the remarkable economic achievements of Asian Muslim-majority countries with high incomes such as Qatar, Bahrain, and Saudi Arabia. Qatar, in particular, shines with a substantial GDP of \$236.26 billion and an impressive per capita income of \$87,480.4, primarily due to its abundant natural gas resources. Similarly, the UAE and Kuwait benefit from high per capita incomes of \$52,866.6 and \$37,533.2, respectively, fueled by their diverse economies and significant oil revenues. Meanwhile, Oman and Bahrain are focused on advancing their industries and enhancing the quality of life for their citizens.

Table 4

High-Income Economics (14006 \$ or more)

Countries	GDP	GDP Per-Capita Income (USD)
Qatar	236.26 billion	87480.4
Bahrain	44.38 billion	29084.3
Saudi Arabia	1.11 trillion	28895
Brunei Darussalam	16.68 billion	33430.9
Kuwait	175.36 billion	37533.2
UAE	507.06 billion	52866.6
Oman	114.67 billion	23565.3

Sources: World Bank (2022), Countries' GDP and GDP per capita income in (USD)

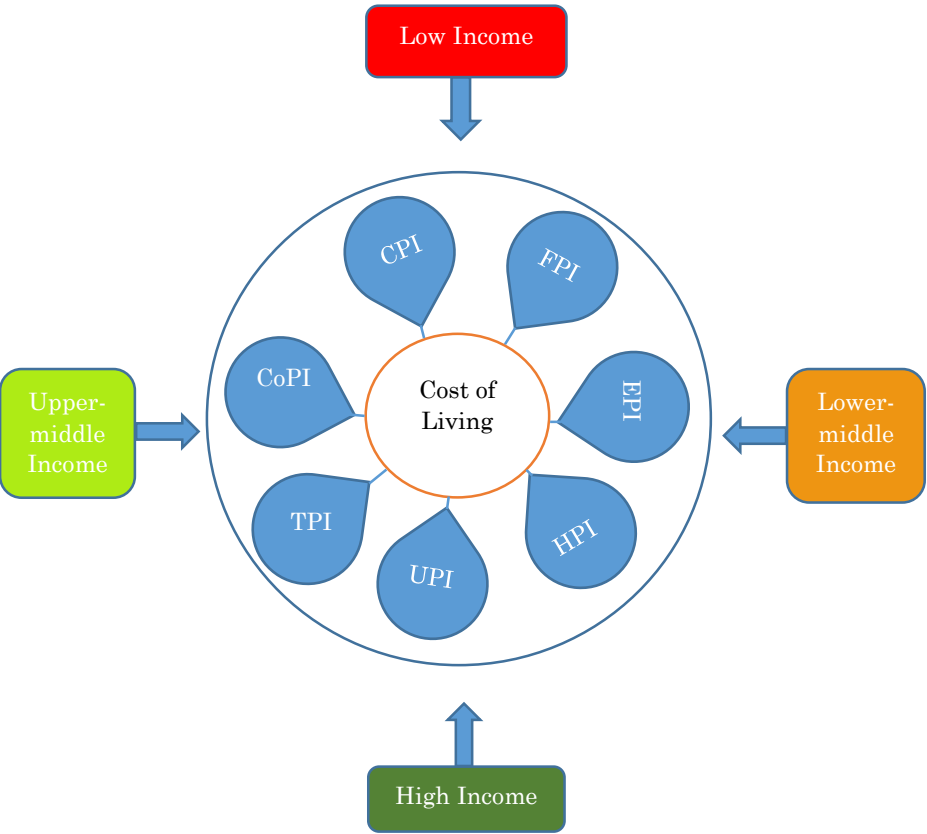
3. Research Methodology

The above analysis shows a considerable variation in the per-capita income and the purchasing power of the people among the Asian Muslim-majority countries. We examine how such variation affects the cost of living in these nations. We follow descriptive analysis of various cost of living indices for the selected countries, which include Consumer Price Index (CPI), Food Price Index (FPI), Transport Price Index (TPI), Health Price Index (HPI), Utilities Price Index (UPI), Education Price Index (EPI), and Communication Price Index (CoPI). The CPI measures overall price rises, whereas sector-specific indexes indicate how different consumption categories

influence different income groups. Food and utility costs typically constitute larger shares of low-income budgets, making these households more vulnerable to price fluctuations (FAO, 2023; IEA, 2022). Transportation costs affect mobility and employment access, particularly for urban low-income earners (ADB, 2023), whereas education and health expenses represent critical human capital investments that show significant variation across income levels (UNESCO, 2022; WHO, 2023). While smaller in proportion, communication costs increasingly influence economic participation and digital inclusion (ITU, 2023).

The basic statistics of these indices are compared for various income groups, viz., high income, upper middle income, lower middle income, and low-income categories, using ANOVA and bar charts. The Scheffé test was used to compare income groups while controlling for errors from multiple comparisons. It ensures that the differences found in price indices are statistically reliable. The study investigates the link between income levels and the cost of living by examining how these indices fluctuate annually. It also determines which particular elements have the most effect on specific income brackets. Each variable is analysed separately, and a bar chart is also examined to compare variables based on income level. The base year for all the variables is taken as 2010:100.

Figure 1
Methodological Framework



There were gaps between the years for certain variables, which were addressed by estimating the missing values using past trends and future projections, ensuring continuity. National websites often present data in their native languages, requiring the use of translation tools for interpretation, and we use Google Translate and ChatGPT to translate the data. Another critical issue was the inconsistency in baseline years across countries. While the World Bank standardises most indicators to the 2010 baseline, some countries use different base years. To ensure comparability, statistical techniques were applied to adjust all data to a uniform 2010 baseline, allowing consistent cross-country and temporal comparisons.

linear interpolation (for missing Year): $yt=yt-1+2(yt+1-yt-1)$

where (yt) represents missing values between known data points $yt-1$ and $yt+1$.

Rebased Index_i = (Original Index_i / Original Index₂₀₁₀) × 100

Note: linear interpolation for temporal gaps follows the approach explicitly detailed in the UNDP-Islamic Development Bank's Multidimensional Poverty in OIC Member Countries report (2021, Section 3.1.2) for harmonizing inflation data across Islamic economies, while index rebasing adheres to the World Bank's International Comparison Program Handbook (2020), recognized as the gold standard for cross-country price comparisons

The study uses secondary data from 24 Asian countries with the largest Muslim populations. These 24 countries are chosen based on the prominence of the Islamic religion and where Muslims make up over 60% of the population (see Table 5). The observed differences in the cost of living among these nations justify selecting those with a large Muslim population. These nations exhibit notable differences in economic indicators, even though they have similar sociocultural ideologies and religious beliefs. By dividing the chosen nations into four income-based groups, this study seeks to investigate and contrast these differences. Further, these countries are classified into four economic categories: low-income (3 countries), lower-middle-income (7 countries), upper-middle-income (7 countries), and high-income (7 countries) economies. The categorisation is based on the World Bank country, as provided in Tables 1-4. The data for all these variables were collected from 2010 to 2022 (annual average, secondary data).

Table 5
Population by Muslim

No	Country	Population	
		Population by Muslim	Total Population
1	Afghanistan	99.7%	43.8 million
2	Azerbaijan	95 %	10.4 million
3	Bahrain	70%	1.6 million
4	Bangladesh	89.1%	175.7 million
5	Brunei	66%	4.66 lakh
6	Indonesia	87%	285.7 million
7	Iran	99.4%	92.4 million
8	Iraq	95%	47 million
9	Jorden	82%	11.5 million

10	Kazakhstan	70%	20.8 million
11	Kuwait	74.6%	5 million
12	Kyrgyzstan	88%	7.3 million
13	Lebanon	67%	5.8 million
14	Malaysia	61.3%	34 million
15	Oman	85.9%	5.5 million
16	Saudi Arabia	100%	34.6 million
17	Syria	88%	25.6 million
18	Turkey	99%	87.7 million
19	Pakistan	96.46%	255.2 million
20	Qatar	67%	3.1 million
21	Maldives	100%	5.5 lakh
22	Uzbekistan	88%	37.1 million
23	Yemen	98%	41.8 million
24	United Arab Emirates	76%	11.3 million

Source: World population review (2025)

4. Results and Findings

The analysis of the cost of living using various price indices indicates significant differences in income and living costs among the Muslim-majority countries.

4.1 Cost of Living Analysis Using Consumer Price Index (CPI)

Consumer Price Index (CPI) measures the average price change consumers pay for a basket of goods and services over time. It provides the general price levels and variations in the cost of living across income brackets. Table 6 shows that high-income countries have consistent and stable pricing levels across time, as seen by their low coefficient of variation (CV) of 0.080 and mean score of 111.19. This stability is associated with robust economic systems and stringent market regulations in these countries. Conversely, low-income countries show much variation, as shown by their significantly higher mean score of 541.61 and CV of 1.819. These discrepancies indicate economic instability and susceptibility to external shocks, such as changes in the worldwide price of commodities or fluctuations in exchange rates. Lower-middle-income countries record a mean CPI of 203.67 and a CV of 1.218, showing significant volatility. In contrast, upper-middle-income countries show far more stable pricing levels, with a mean of 141.82 and a CV of 0.403. The data emphasises the disparities in economic conditions, with higher-income countries sustaining stable price trends and lower-income countries experiencing greater volatility and inflationary pressures. This difference may impact low- and middle-income countries' buying power, financial planning, and overall quality of life.

The comparison of the Consumer Price Index (CPI) across income categories in Asian Muslim Majority countries reveals significant disparities. Specifically, the CPI in low-income countries is significantly higher than in both high-income (mean difference = 430.42, $p = 0.000$) and upper-income countries (mean difference = -399.80, $p = 0.000$). Similarly, lower-income countries exhibit a significantly lower CPI than low-income countries (mean difference = -337.95, $p = 0.000$). However, no significant differences in CPI are observed between high-income and lower-income countries ($p=0.424$), high-income and upper-income countries ($p=0.959$), or between upper-income and lower-income countries ($p=0.740$). These results suggest that low-income countries experience a uniquely higher cost of living, while CPI levels among the other income groups remain statistically comparable.

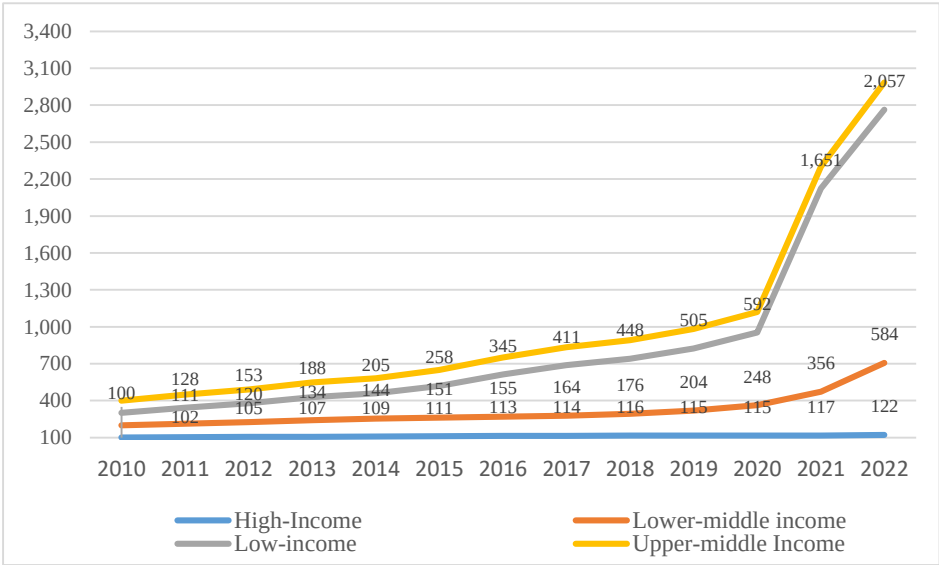
Table 6
Consumer Price Index (CPI)
Descriptive Statistics
CPI

	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	111.192	141.816	203.667	541.613
Std. Deviation	8.917	57.082	248.101	985.196
Coefficient of variation	0.080	0.403	1.218	1.819
ANOVA				
Groups	High-Income	Low-Income	Lower-middle Income	
Low-Income	430.42 (p=0.000***)	—	—	
Lower-middle Income	92.48 (p=0.424)	-337.95 (p=0.000***)	—	
Upper-middle Income	30.62 (p=0.959)	-399.80 (p=0.000***)	-61.85 (p=0.740)	

Sources: Authors' estimations

Over time, the CPI shows a rising tendency across all income classes as illustrated in Figure 2. However, the rate of increase varies noticeably. In high-income countries, the CPI progressively increases, indicating a steady rise in the general price of goods and services. The expansion is more noticeable in middle-income countries, indicating heightened inflationary pressures. Low-income countries tend to have slower growth and a lower CPI overall. These differences show that whereas high-income nations see more consistent price fluctuations, middle- and low-income countries face varying degrees of price volatility.

Figure 2
CPI by Year and Income Level



Sources: World Bank Group (CPI by Countries)

4.2 Cost of Living Analysis Using Food Price Index (FPI)

The Food Price Index (FPI) measures the average change in international or domestic prices of a basket of food commodities over time. The index shows significant income-level disparities, reflecting food market dynamics and economic stability variances. The descriptive and ANOVA analysis using FPI for different income categories is given in Table 7. High-income countries have consistent and predictable food prices throughout time, as seen by their mean score of 122.36 and extremely low coefficient of variation (0.090). Nevertheless, low-income countries show notable volatility and unpredictability, with a mean index of 1059.88 and a coefficient of variation of 2.197. This highlights problems in these regions, such as food shortages and market instability. As seen by their substantially more significant coefficient of variation (2.811) and mean index of 214.17, lower-middle-income countries show significantly more pricing fluctuations than low-income countries. Upper-middle-income countries have a mean index of 153.74 and a coefficient of variation of 0.883, indicating moderate stability. The study shows that food price trends and economic resilience are consistent, with high-income countries maintaining stability while lower-income regions experience substantial fluctuation.

The analysis of the Food Price Index across different income categories in Asian Muslim Majority countries highlights substantial disparities. Low-income countries exhibit a significantly higher Food Price Index compared to all other groups, with the differences being highly significant when compared to high-income (mean difference = 947.52, $p = 0.000$), lower-income (mean difference = -845.71, $p = 0.000$), and upper-income countries (mean difference = -906.14, $p = 0.000$). In contrast, no statistically significant differences are observed between high-income and lower-income countries ($p=0.895$), high-income and upper-income countries ($p=0.992$), or between upper-income and lower-income countries ($p=0.975$). These findings indicate that low-income countries face a significantly higher burden of food prices, while the Food Price Index remains statistically similar among the other income categories.

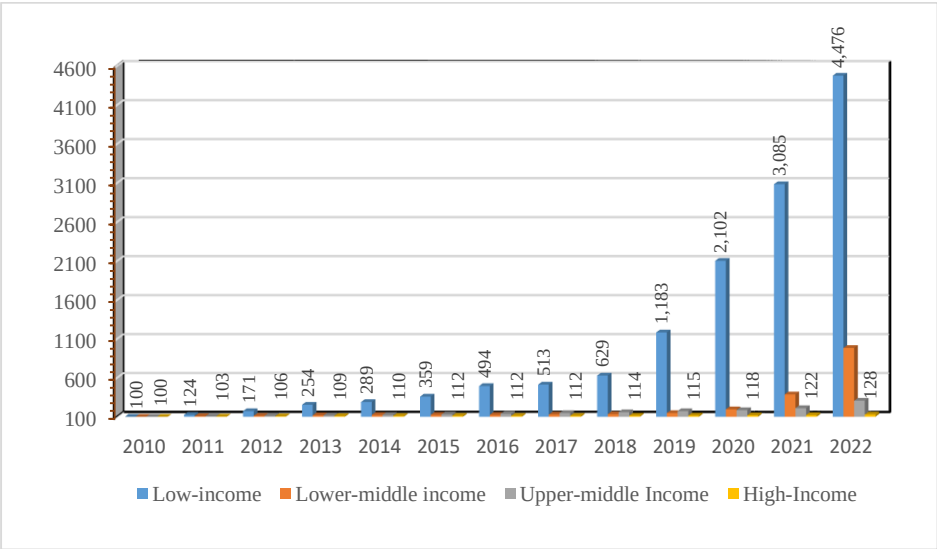
Table 7
Descriptive Analysis for Food Price Index (FPI)

	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	112.357	153.739	214.170	1059.875
Std. Deviation	10.076	135.684	601.945	2328.809
Coefficient of variation	0.090	0.883	2.811	2.197
ANOVA				
Groups	High-Income		Low-Income	Lower-middle Income
Low-Income	947.52 ($p=0.000^{***}$)		—	—
Lower-middle Income	101.81 ($p=0.895$)		-845.71 ($p=0.000^{***}$)	—
Upper-middle Income	41.38 ($p=0.992$)		-906.14 ($p=0.000^{***}$)	-60.43 ($p=0.975$)

Sources: Authors' Estimation

The trends in FPI for various income groups for the study period are given in Figure 3. It shows that high-income countries have maintained stability, exhibiting strong food supply networks and effective price policies. Middle-income countries exhibit moderate oscillations, influenced by external factors like seasonal fluctuation or import reliance. Conversely, low-income countries are volatile, underscoring their vulnerability to external shocks and the consequences of climate change. These patterns demonstrate that although high-income nations continue to enjoy stability, low-income nations face difficulties achieving food price stability, exacerbating pre-existing disparities.

Figure 3
Food Price Index by Income Levels and Year



Sources: World Bank Group (Food Price Index)

4.3 Cost of Living Analysis Using Utility Price Index (UPI)

The Utilities Price Index (UPI) measures the changes in the prices of utilities such as electricity, water, natural gas, and other energy-related services over time. An analysis of the cost of living in the Asian Muslim-majority Countries using the utility price index is given in Table 8. The Utilities Price Index, which displays highly constant utility costs in high-income countries with a mean index of 106.10 and a CV of 0.089, also reveals economic disparities. Low-income countries had a mean score of 570.99 and a CV of 1.753, indicating significant price volatility that may be brought on by erratic energy supply or policy changes. As seen by their mean index of 125.03 and CV of 0.303, lower-middle-income countries have relatively steady utility costs compared to low-income countries. Upper-middle-income countries exhibit comparable stability with a mean of 124.38 and a CV of 0.290. These differences show how wealthier countries benefit from efficient energy markets and infrastructure, whereas lower-income countries struggle to keep prices steady.

The analysis of the Utility Price Index across income categories in Asian Muslim Majority countries reveals notable disparities, primarily involving low-income countries. The Utility Price Index is significantly higher in low-income countries compared to high-income (mean difference = 464.89, $p = 0.000$), lower-income (mean difference = -445.96, $p = 0.000$), and upper-income countries (mean difference = -

446.61, $p = 0.000$). However, there are no statistically significant differences in utility prices between high-income and lower-income countries ($p=0.988$), high-income and upper-income countries ($p=0.989$), or between upper-income and lower-income countries ($p = 0.980$). These results indicate that low-income countries bear a significantly higher utility cost burden, while the other income groups experience relatively similar utility price levels.

Table 8

Descriptive Analysis Using the Utilities Price Index

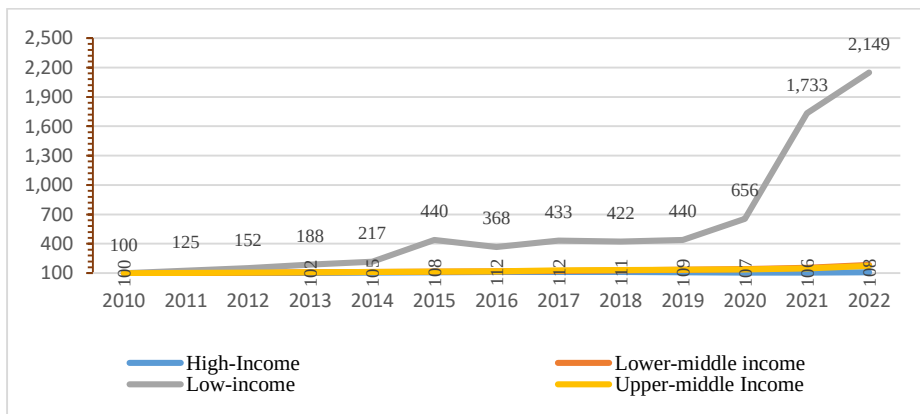
	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	106.101	124.383	125.034	570.993
Std. Deviation	9.414	36.081	37.889	1000.748
Coefficient of variation	0.089	0.290	0.303	1.753
ANOVA				
Groups	High-Income	Low-Income	Lower-middle Income	
Low-Income	464.89 ($p=0.000^{***}$)	—	—	
Lower-middle Income	18.93 ($p=0.988$)	-445.96 ($p=0.000^{***}$)	—	
Upper-middle Income	18.28 ($p=0.989$)	-446.61 ($p=0.000^{***}$)	-0.65 ($p=0.980$)	

Sources: Authors' Estimation

The UPI trends in Figure 4 indicate modest increases over time in high-income countries due to steady improvements in modern utilities. Continuous improvements in utility infrastructure cause a slight upward trend in middle-income countries. However, there are a few adjustments in low-income countries, where prices remain unchanged. This widening gap shows improvements in utility availability for high- and middle-income nations, while low-income countries still face challenges.

Figure 4

Utilities Price Index by Year and Income Levels



Sources: World Bank Group and OECD Data (Utilities Price Index)

4.4 Cost of Living Analysis Using Health Price Index (HPI)

The Health Price Index (HPI) measures the changes in the cost of healthcare services, medical products, and related expenses over time. The analysis of the cost of living in the selected income categories of countries is given in Table 9. The HPI displays differences in healthcare affordability and price stability by income level. High-income countries exhibit consistent and stable health service pricing throughout time, with a mean score of 108.47 and an exceptionally low coefficient of variation (0.059). However, low-income countries show significant volatility and price unpredictability, with a mean score of 347.28 and a coefficient of variation of 1.070. This may be a sign of issues with healthcare accessibility and affordability. Lower-middle-income countries have a moderately variable coefficient of variation (0.634) and a mean of 141.94, suggesting progress but still somewhat unstable. With a mean score of 125.34 and a coefficient of variation of 0.264, upper-middle-income countries have more stable health prices between the extremes of low- and high-income regions. These trends demonstrate how crucial economic expansion is to ensuring steady and reasonable healthcare expenditures.

The comparison of the Health Price Index across income categories in Asian Muslim Majority countries shows significant differences, primarily involving low-income countries. Low-income countries have a significantly higher Health Price Index compared to high-income (mean difference = 238.81, $p = 0.000$), lower-income (mean difference = -205.34, $p = 0.000$), and upper-income countries (mean difference = -221.94, $p = 0.000$). However, there are no statistically significant differences in Health Price Index between high-income and lower-income countries ($p = 0.462$), high-income and upper-income countries ($p = 0.884$), or between upper-income and lower-income countries ($p = 0.888$). These findings indicate that low-income countries experience significantly higher health-related costs, while the health price levels are statistically comparable among high-income, lower-income, and upper-income countries.

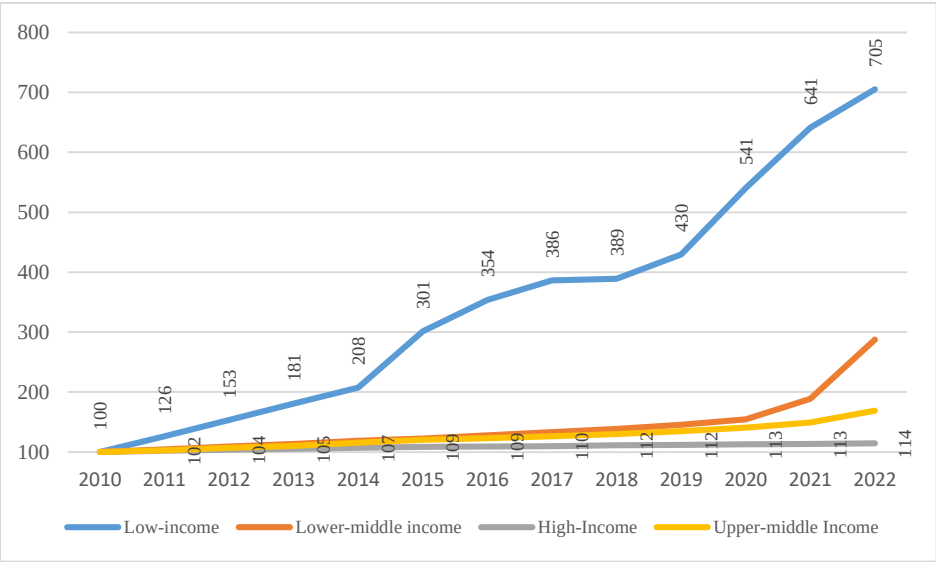
Table 9
Descriptive Analysis Using Health Price Index

	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	108.473	125.337	141.935	347.279
Std. Deviation	6.402	33.124	89.951	371.651
Coefficient of variation	0.059	0.264	0.634	1.070
ANOVA				
Groups	High-Income	Low-Income	Lower-middle Income	
Low-Income	238.81 ($p=0.000^{***}$)	—	—	
Lower-middle Income	33.46 ($p=0.462$)	-205.34 ($p=0.000^{***}$)	—	
Upper-middle Income	16.86 ($p=0.884$)	-221.94 ($p=0.000^{***}$)	-16.60 ($p=0.888$)	

Sources: Authors' Estimation

Figure 5 shows that the HPI has increased somewhat at all income levels, while the rate of change has varied significantly. The HPI indicates a consistent increase in high-income countries, indicating rising healthcare costs. Moderate rises and steady rising patterns are observed in middle-income countries. Conversely, low-income countries show less change and remain comparatively stable. These trends draw attention to disparities in health-related costs, progressively widening the wealth gap between high- and low-income countries.

Figure 5
Health Price Index by Income Level and Year



Sources: World Bank Group, OECD, and Countries' official domestic websites

4.5 Cost of Living Analysis Using Transport Price Index (TPI)

The Transport Price Index (TPI) tracks the changes in the cost of transportation-related goods and services over time. It considers changes in fuel prices and infrastructure improvements and reveals notable differences between income-level groupings among the Asian Muslim-majority Countries, as shown in Table 10. High-income countries have consistent and predictable transportation costs throughout time, with a mean index of 112.87 and a coefficient of variation (CV) of 0.106. On the other hand, the mean scores (799.81) and CV (2.032) of low-income countries are much higher, suggesting considerable instability and variation. This increases the likelihood of problems like fluctuating fuel prices or insufficient infrastructure for transportation. Lower-middle-income countries show some fluctuation, but not as much as low-income countries, with a mean of 168.19 and a CV of 1.719. The price stability of upper-middle-income countries is moderate, with a mean of 122.22 and a CV of 0.398. These trends show how steady transportation costs and economic development are related, with high-income countries benefiting from better infrastructure and market efficiency.

The analysis of the Transport Price Index across income categories in Asian Muslim Majority countries reveals significant differences driven mainly by the low-income group. Low-income countries have a significantly higher Transport Price Index compared to high-income (mean difference = 686.94, $p = 0.000$), lower-income (mean difference = -631.62, $p = 0.000$), and upper-income countries (mean difference = -

677.58, $p = 0.000$). In contrast, no statistically significant differences are found between high-income and lower-income countries ($p = 0.941$), high-income and upper-income countries ($p = 0.988$), or between upper-income and lower-income countries ($p = 0.965$). These results indicate transport costs are significantly higher in low-income countries, whereas other income groups experience similar transport prices.

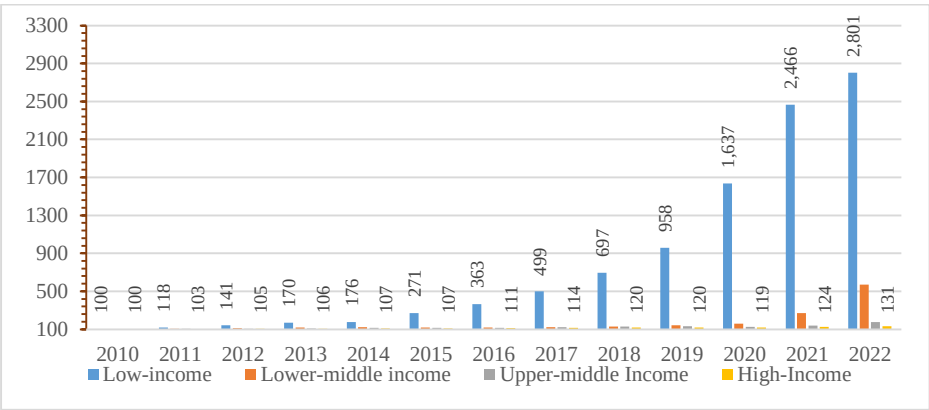
Table 10
Descriptive Analysis Using Transport Price Index

	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	112.867	122.222	168.188	799.805
Std. Deviation	11.921	48.640	289.100	1625.252
Coefficient of variation	0.106	0.398	1.719	2.032
ANOVA				
Groups	High-Income	Low-Income	Lower-middle Income	
Low-Income	686.94 ($p=0.000^{***}$)	—	—	
Lower-middle Income	55.32 ($p=0.941$)	-631.62 ($p=0.000^{***}$)	—	
Upper-middle Income	9.35 ($p=0.988$)	-677.58 ($p=0.000^{***}$)	-45.97 ($p=0.965$)	

Sources: Authors' Estimation

A graphical presentation of the movement in TPI for the various income categories for the study period is shown in Figure 6. The TPI shows annual variations in income levels. The consistent upward trend in high-income countries suggests slow rises in transportation costs. Middle-income countries experience moderate growth, most likely due to expanding infrastructure and urbanisation. In low-income countries, where costs are mostly fixed yet represent a more significant burden relative to income, changes happen more slowly. This disparity demonstrates that while low-income countries stagnate, high- and middle-income countries invest in transportation development.

Figure 6
Transport Price Index by Income Levels and Years



Sources: World Bank Group, OECD, and Countries' official domestic websites

4.6 Cost of Living Analysis Using Education Price Index (EPI)

The Education Price Index (EPI) measures changes in the cost of education-related goods and services over time. This section analyses and compares the cost of living using EPI among the selected countries, as shown in Table 11. The EPI exhibits significant variance across socioeconomic groups because of differences in the affordability and funding of education. The mean score of 117.55 and the CV of 0.120 indicate that educational costs are relatively stable in high-income countries. With a CV of 1.819 and a mean of 428.25, low-income countries exhibit notable heterogeneity and likely barriers to accessible education. With a mean of 140.95 and a CV of 0.349, lower-middle-income countries show better stability but face challenges compared to low-income countries. Upper-middle-income countries had a mean score of 133.40 and a CV of 0.492, which indicates significant diversity. The results demonstrate that economic levels affect the affordability and stability of education, with wealthier nations having more readily available and stable educational systems.

The analysis of the Education Price Index across income categories in Asian Muslim Majority countries indicates significant disparities centred on the low-income group. Low-income countries show a significantly higher Education Price Index compared to high-income (mean difference = 310.70, $p = 0.000$), lower-income (mean difference = -287.30, $p = 0.000$), and upper-income countries (mean difference = -294.85, $p = 0.000$). However, there are no statistically significant differences between high-income and lower-income countries ($p = 0.955$), high-income and upper-income countries ($p = 0.985$), or between upper-income and lower-income countries ($p = 0.998$). These results suggest that education costs are substantially higher in low-income countries, while the other income groups experience similar and comparatively lower education price levels.

Table 11
Descriptive Analysis Using the Education Price Index

	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	117.547	133.400	140.950	428.246
Std. Deviation	14.078	65.689	49.176	779.096
Coefficient of variation	0.120	0.492	0.349	1.819
ANOVA				
Groups	High-Income	Low-Income	Lower-middle Income	
Low-Income	310.70 (p=0.000***)	—	—	
Lower-middle Income	23.40 (p=0.955)	-287.30 (p=0.000***)	—	
Upper-middle Income	15.85 (p=0.985)	-294.85 (p=0.000***)	-7.55 (p=0.998)	

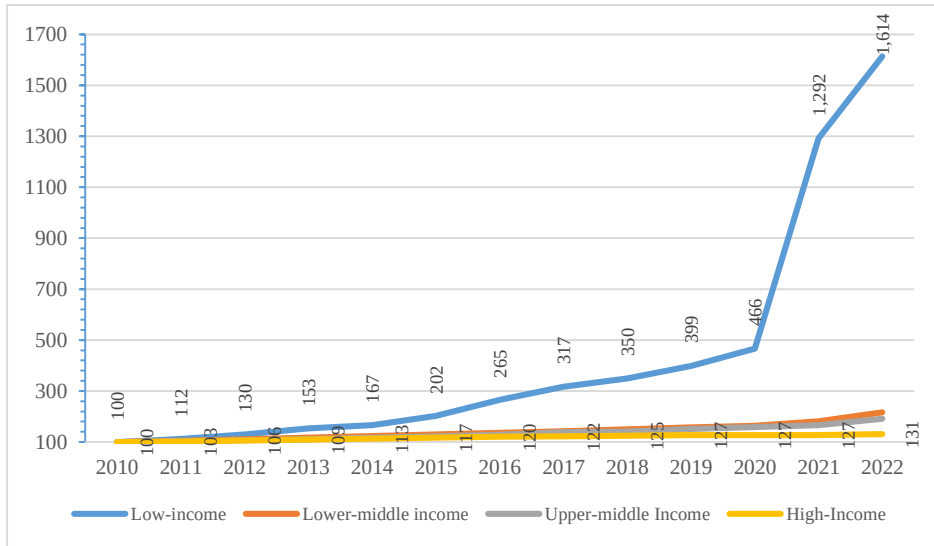
Sources: Authors' Estimation

The movement in EPI for the selected income groups is plotted in Figure 7. According to the Education Price Index, distinct trends have surfaced across various income levels. A significant rise has been observed in high-income countries due to the

consistent rise in educational costs, which may be linked to increased investment in educational facilities and resources. In middle-income countries, the measure indicates a moderate pace of growth, with little annual fluctuation. Conversely, low-income countries exhibit stability or just slight variations, indicating that the price of education has not altered significantly. This disparity demonstrates how growing educational costs affect people of all income levels, with significant changes occurring in high-income countries and minimal change in low-income ones.

Figure 7

Education Price Index by Income Levels and Year



Sources: World Bank Group, OECD, and Countries' official domestic websites

4.7 Cost of Living Analysis Using Communication Price Index (CoPI)

The Communication Price Index (CoPI) measures changes in the costs of communication-related goods and services over time. Table 12 shows that the high-income countries demonstrate moderate and highly consistent communication pricing that helped them to achieve the lowest mean index of 98.40 and a CV of 0.075. Low-income countries, on the other hand, have a mean score of 168.07 and a CV of 0.644, which suggests more variability and higher costs. The communication prices in lower-middle-income countries are relatively stable, with a mean of 124.19 and a CV of 0.328. Upper-middle-income countries report relatively stable and affordable communication prices, with a mean score of 106.79 and a CV of 0.161. According to the study, high-income countries have used technological advancements and market efficiency to maintain low and stable communication costs. In contrast, lower-income countries find it challenging to attain similar outcomes.

The Communication Price Index across income categories in Asian Muslim Majority countries reveals several statistically significant differences. Low-income countries have a significantly higher Communication Price Index compared to high-income (mean difference = 69.67, $p = 0.000$), lower-income (mean difference = -43.87, $p = 0.000$), and upper-income countries (mean difference = -61.28, $p = 0.000$). Lower-income countries also show a significantly higher Communication Price Index than high-income countries (mean difference = 25.80, $p = 0.001$). However, the differences between high-income and upper-income countries ($p = 0.665$) and between upper-

income and lower-income countries ($p = 0.082$) are not statistically significant. These findings suggest that communication costs are significantly higher in low- and lower-income countries, while high- and upper-income groups experience relatively similar and lower communication price levels.

Table 12

Descriptive Analysis Using the Communication Price Index

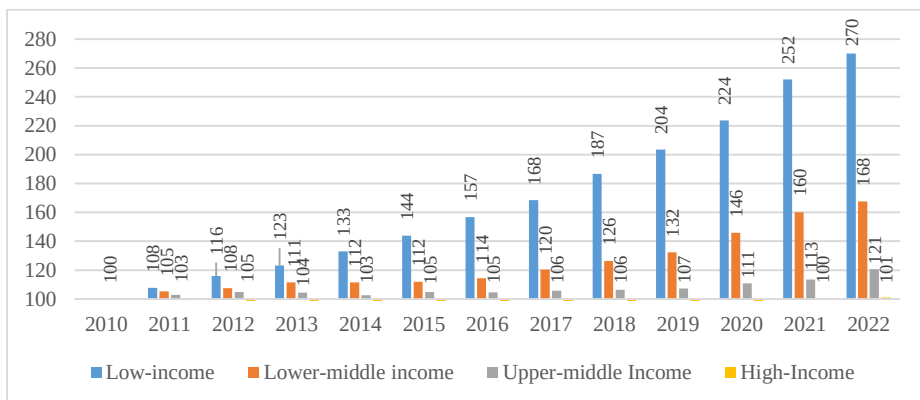
	High-Income	Upper-middle Income	Lower-middle income	Low-income
Mean	98.396	106.787	124.194	168.066
Std. Deviation	7.331	17.175	40.787	108.257
Coefficient of variation	0.075	0.161	0.328	0.644
ANOVA				
Groups	High-Income	Low-Income	Lower-middle Income	
Low-Income	69.67 ($p=0.000^{***}$)	—	—	
Lower-middle Income	25.80 ($p=0.001^{***}$)	-43.87 ($p=0.000^{***}$)	—	
Upper-middle Income	8.39 ($p=0.665$)	-61.28 ($p=0.000^{***}$)	-17.41 ($p=0.082^*$)	

Sources: Authors' Estimation

Figure 8 exhibits a declining tendency for the standard price index over time in high-income countries, reflecting more reasonably priced communication services due to improved infrastructure and technological advancements. The index is declining more slowly but steadily in middle-income countries, which suggests communication infrastructure improvements. However, there have been few advances in low-income countries, where communication costs remain disproportionately high. These trends indicate a growing disparity, with high-income countries making enormous strides and low-income countries experiencing slight improvements in price and availability.

Figure 8

Communication Price Index by Income Level and Year



Sources: World Bank Group, OECD, and Countries' official domestic websites

5. Conclusion

The study analysed and compared the cost of living in 25 Asian Muslim-majority countries using seven price indices and by grouping these countries into different income categories. We observed significant differences between high-income and low-income countries in these price indices due to infrastructure, market stability, and economic development factors. For high-income countries, all indices consistently display low coefficients of variation (CV), suggesting stable and predictable pricing trends. For example, their food price index (CV: 0.090) and communication price index (CV: 0.075) exhibit minimal volatility, suggesting robust economic institutions and efficient markets. The food (CV: 2.197) and transportation (CV: 2.032) sectors demonstrate the substantial fluctuation faced by low-income countries, underscoring the challenges of price instability and inflationary pressures. Significant variations exist in the overall cost levels as well. High-income countries continue to have lower mean indices for things like utilities (106.10) and communication (98.40), reflecting affordability and efficacy. Conversely, low-income countries report incredibly high costs for basic requirements, with food (1059.88) and education (428.25) having high indices. Middle-income countries, which fall between these two extremes, show transitional trends with a fair amount of stability in areas like health and education. However, fluctuations in basic needs such as food and transportation remain concerning and indicate ongoing economic transformations. A thorough picture of variations in the cost of living may be obtained from the consumer price index, which shows notable volatility in low-income nations (CPI: 541.61, CV: 1.819) and stability in high-income countries (CPI: 111.19, CV: 0.080). Middle-income nations exhibit intermediate trends that draw attention to areas that need improvement and those that are moving slowly.

The comparative analysis of various price indices across income categories in Asian Muslim Majority countries reveals a consistent pattern: low-income countries face significantly higher costs across all essential sectors, including consumer goods, food, utilities, health, transport, education, and communication. These outcomes are consistent with Konüs's (1939) concept of the cost of living: the indices effectively proxy the "minimum expenditure" required to maintain a given standard of living, and this requisite expenditure is evidently much higher in low-income countries. In each index, low-income groups show statistically significant differences compared to high-income, lower-income, and upper-income countries, indicating a disproportionate cost burden. In contrast, high-, lower-, and upper-income countries generally exhibit no significant differences, suggesting a relatively uniform and lower price environment. The observed disparities also illustrate the social stratification perspective given by Giddens (1991). Lower-income populations must allocate a disproportionately large share of their budgets to non-discretionary essentials (food, utilities, health, etc.), rendering them highly vulnerable to price shocks. This trend highlights a critical economic imbalance, where the poorest countries endure the highest prices for basic services and necessities, exacerbating financial strain and deepening inequality within the region.

Among low-income countries, Syria and Yemen experienced severe price fluctuations between 2010 and 2022, primarily due to prolonged internal conflicts and political instability, which led to exceptionally high inflation rates. The structural inflation theory of Thirlwall (1974) explains how weak infrastructure, policy instability, and external shocks (e.g., conflict or sanctions) exacerbate inflationary pressures in low-income contexts. According to the World Bank (2023), all variables are standardised

to a baseline index of 100 in 2010. But by 2022, Yemen's Consumer Price Index (CPI) soared to 974, while Syria's CPI rose to 5,020, indicating extreme price volatility across all economic indices. In contrast, Afghanistan experienced significantly greater price stability during the same period, despite being categorised as a low-income country (World Bank, 2023). The Afghan government could keep inflationary pressures under control despite these issues. Other economic indices also showed modest increases, with the CPI rising steadily from 100 in 2010 to 176 in 2022.

Significant inflation also occurred in Iran and Lebanon, two lower-middle-income nations. Affected by ongoing political and economic instability and internal turmoil, Lebanon's CPI in 2022 was 1,660. Similarly, Iran has endured protracted financial sanctions from the United States and high inflation rates, with its CPI hitting 1,480 in 2022 (Reuters, 2024; Farooq, 2022). Reuters (2025). These numbers demonstrate the wide range of prices and the significant influence of economic and geopolitical factors on regional inflation dynamics.

5.1 Suggestions and Recommendations

Strengthening market stability in low-income Asian Muslim-majority countries is important to address the volatility in necessities like food and transportation. Infrastructure, agricultural production, and energy efficiency initiatives can all help stabilise prices. Government initiatives like market regulation, subsidies, and international aid are crucial to reducing volatility and promoting affordability. Healthcare and education costs remain a significant concern in low- and middle-income countries. The high indices for these areas indicate barriers to accessibility and affordability. Increasing public funding, fostering partnerships with international organisations, and implementing targeted cost-cutting strategies are all necessary to improve social well-being and human capital development. The relatively low communication and utility indices in high-income countries demonstrate the potential for technological advancements. Lower-income Asian Muslim-majority countries may stabilise and reduce costs in these sectors by investing in digital infrastructure and renewable energy. These measures can also promote economic growth by improving overall efficiency and connectivity. Finally, the fluctuation in the CPI across income levels underscores the need for better inflation management. Resolving structural inefficiencies, strengthening monetary policy, and establishing trustworthy price monitoring systems can all help to lower inflationary pressures. By encouraging more price stability and predictability, these programs can improve economic resilience and living standards for individuals across the Asian Muslim-majority Countries.

5.2 Limitations and Scope for Further Research

One of the major limitations of the study is the reliance on non-standardised data due to the unavailability of internationally comparable data. The study relied on various national official documents that required translation from the local languages, introducing potential interpretation errors. The selected countries used divergent index reference years, which were harmonised using statistical rebasing methods. The study also faced temporal data gaps due to missing values across various years, which were filled by using interpolation techniques. This would have influenced the statistical values used for inferences.

Despite sharing comparable political histories marked by prolonged conflict and having similar religious and socio-political contexts, Afghanistan exhibited relatively

stable inflation trends. Further research could explore why Afghanistan, unlike other low-income countries such as Syria and Yemen, did not experience similarly high levels of price variation during the 2010–2022 period. Investigating the underlying factors, such as economic policies, external aid management, governance structure, and market interventions, may provide valuable insights into the differing inflationary outcomes among these conflict-affected nations.

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