

Trends of Income Inequality and Urbanization in Nepal

Jagrit Kanodia¹ and Shivansh Bhattarai²

^{1,2}Student, Department of Economics, Rato Bangala School

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ABSTRACT

Nepal is experiencing rapid urbanization, partly driven by young people opting out of foreign employment and seeking opportunities domestically. Urbanization has emerged as a significant driver of Nepal's economic transformation. Concentrated urban access to healthcare, education, and employment opportunities has facilitated rural-to-urban migration. Income inequality continues to pose a significant challenge in Nepal's economy. This study examines the relationship between urbanization and income inequality in Nepal.

Keywords: Income Inequality, Urbanization and Nepal

Introduction

Urbanization refers to the rising proportion of the population residing in urban areas. Nepal has experienced substantial urban growth over the past few decades. It is transforming Nepal from a rural-based population to an increasingly urbanized one. Government reports indicate a substantial increase in urbanization and income inequality in Nepal. Administratively, over 66% of Nepal's population is classified as urban, though functionally the share is closer to 27%.

In the context of Nepal, urbanization has become a significant and widely debated national issue. According to the World Bank, Nepal's Gini coefficient was 30.0 in 2022, indicating a moderate decline in inequality compared to previous years. This decrease signifies moderate inequality in comparison to the global average. Income inequality is a critical concern because it impedes inclusive economic growth, hinders the achievement of Sustainable Development Goals (SDGs), and constrains human capital development. Income inequality in Nepal exacerbates risks for rural migrants, marginalized groups, and households lacking remittance opportunities. Simultaneously, rapid urbanization tends to disproportionately benefit higher-income urban residents.

The contribution of urbanization to increased income inequality in Nepal is hereby assessed, based on evidence from household survey data, in order to test the empirical relationship between the expansion of urban centres and the distribution of income. The findings are supposed to guide policies that maximize the growth benefits of urbanization while addressing the potential risks of inequality.

Literature Review

A 2023 study in Humanities and Social Sciences Communications (Nature portfolio) highlights the adverse effects of urbanization and income inequality on life expectancy in South Asian countries. Evidence suggests that urbanization has amplified income inequality in developing countries such as Nepal, particularly due to rural-to-urban migration. Rural-to-urban migration, driven by the pursuit of better opportunities, is often accompanied by inadequate urban planning, resulting in limited access to healthcare, nutrition, and safe living conditions. Environmental pollution-related risks also increase in these commercialized areas.

Human Development Index (HDI) measures a country's overall progress in health (life expectancy), education (schooling), and standard of living (income); while mortality rate indicates the number of deaths in a population, often specific to age (infant/child) or cause. In this instance, South Asian countries show lower Human Development Index scores and higher under-five mortality. Reasons for this include pollution, industrialization, and resource strain, with inequality leading to these by restricting resource access to those who simply cannot afford it. As a result, urbanization is positively associated with higher income inequality, as rapid growth leads to uneven resource distribution and the exclusion of certain societal groups.

Moreover, in South Asia, urbanization is found to significantly contribute to the escalation in inequality levels in the nations (300% in the Philippines, more than 50% in Indonesia), with a higher Gini coefficient in the former as compared to the latter. Notably, inequality in nations such as Nepal, categorized as a developing economy, escalates because the rich get richer, while those below the poverty line (20.27%) are not catered to with the implementation of policies related to urbanization.

(Thapa, 2024) examines the relationship between economic growth and income inequality in Nepal using data from 1986-2021. By applying the concepts of Augmented-Dickey Fuller (ADF) test and Ordinary Least Squares (OLS) regression models, the research concludes that economic growth does not quantitatively impact income inequality in Nepal. Although the paper does not directly link the effects of urbanization on the income inequality of Nepal, it connects income inequality with structural features of the economy, including regional disparity, migration and

limited access to basic facilities. These findings suggest that urbanization in Nepal has not been inclusive, failing to reduce income inequality despite structural economic transformation.

(Bijukchhen and Phaju, 2023) investigate the effect of corruption, income inequality, and unemployment on poverty of Nepal from annual data from 2000 to 2020. This research uses the Toda-Yamamoto Granger casualty test to inspect relationships among these factors and tests for cointegration and solidity in the data. The results indicate that corruption and unemployment cause poverty, whereas income inequality and poverty influence each other in both ways. Since the paper does not directly analyse the effect of urbanization, institutional factors such as uneven job creation and crippling governance are deeply associated with the urban-rural differences. This associates that urbanization, when accompanied by factors like corruption and unemployment, molds out income inequality and poverty across numerous regions in Nepal.

(Dhungel, 2022) analyses distribution of income across the entire population of Nepal, establishing his findings using metrics like the Gini Coefficient, which measures the degree of income inequality by dividing income held by different demographic groups. The study implies that the Gini Coefficient value for Nepal is 0.4, displaying a significant level of income inequality in the nation. As the study does not directly relate the role of urbanization and rural-urban migration in income inequality, lacklustre health and education services has caused a remarkable wave of people migrating to city centres in search of better health, education and employment. This contributes to the widespread income inequality, where urban and rural areas have different spikes of income inequality.

Thus, the focus on the gaps that exist with regard to the contribution of urbanization on inequality in Nepal, centres on the necessity for more education-based studies specific to the Nepalese Economy, with a focus on exploring the effect of interventions that can curb the negative impacts of inequality, with specific emphasis on health or the government. These gaps reflect broader challenges in understanding the effects of policy interventions on inequality in developing economies.

Most existing studies on urbanization and income inequality focus on Asia as a whole, with limited attention to Nepal-specific conditions. This research addresses this gap by examining the relationship between urbanization and income inequality in Nepal using secondary research on survey data. Additionally, it responds to the lack of research on moderating factors by exploring how differences in access to health, education, and other basic facilities may influence income inequality among urban households.

Methodology

Research Design

This study adopts a quantitative research design to examine the relationship between urbanization and income inequality in Nepal. A descriptive and explanatory approach is employed to examine how urban expansion influences income distribution in Nepal. The quantitative method is appropriate for this study as it allows for systematic comparison of income patterns between urban and rural households using numerical data.

Sources of Data

The study is based on secondary sources of data, provided by well-recognized national and international institutions. Sources of the data are given below:

1. Nepal Living Standards Survey (NLSS)
2. Central Bureau of Statistics (CBS), Nepal
3. World Bank Poverty and Inequality Platform (PIP)

These sources provide detailed information on household income, population distribution, and inequality indicators, making them suitable for analysing income disparities in relation to urbanization in Nepal.

Variables of the Study

- 1) Dependent Variable:

Income inequality, measured using the Gini coefficient and income distribution across population groups.

- 2) Independent Variable:

Urbanization, measured through household location (urban or rural) and the proportion of the population residing in urban areas over time.

Methods of Data Analysis

The data is analysed using descriptive statistical methods. This includes the following:

1. Percentages
2. Tables

3. Bar graphs & Line Graphs

Comparisons between urban and rural household incomes are conducted to assess variations in income distribution. The trends of urbanization with regard to the growth rate of the urban population are compared to trends of income inequality, such as the Gini coefficient, to determine if income inequality increases with urbanization.

Analytical Framework

The analytical framework of this study has been based on the assumption that there is a direct relationship between urbanization and rural-urban migration. This dynamic contributes to income inequality, as individuals with better access to services experience socioeconomic advancement, while those without access remain marginalized.

Data Presentation

Table 1 shows the comparison of average income in Urban vs Rural households of Nepal- province wise

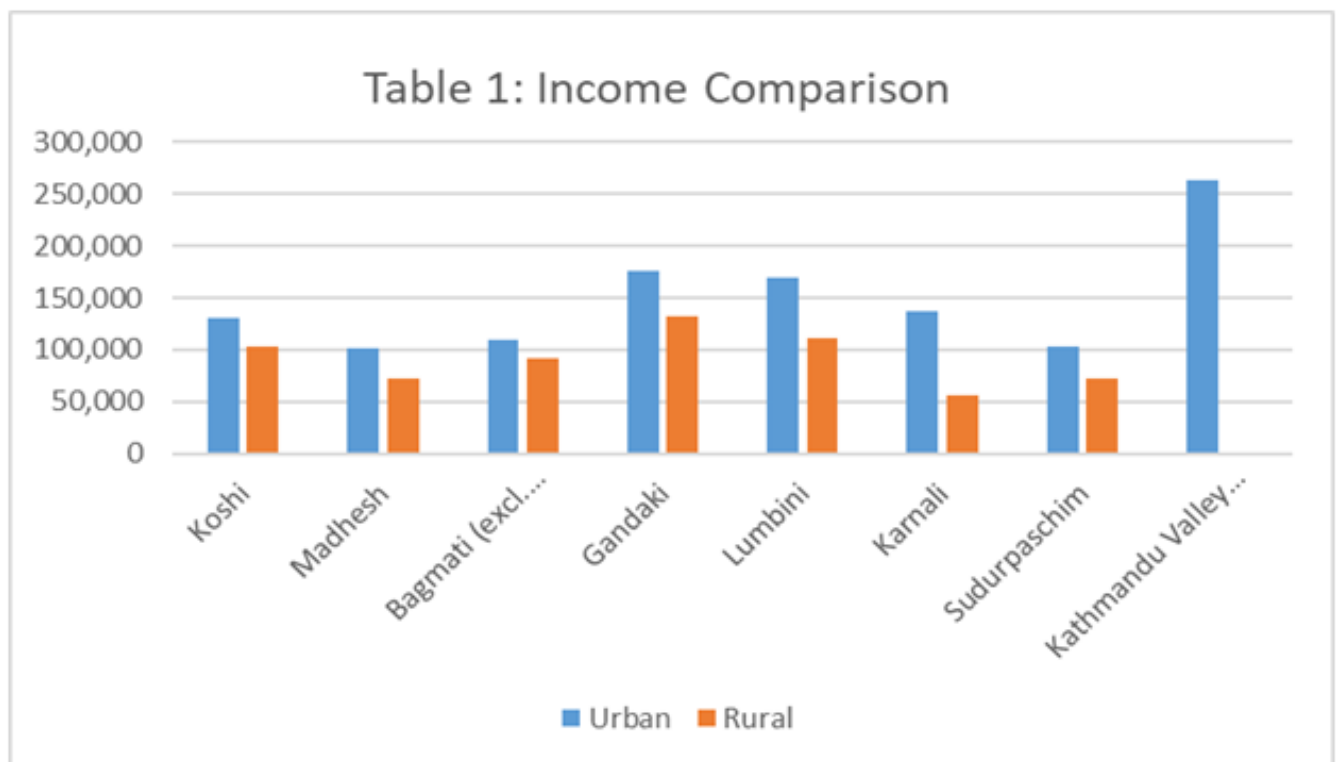
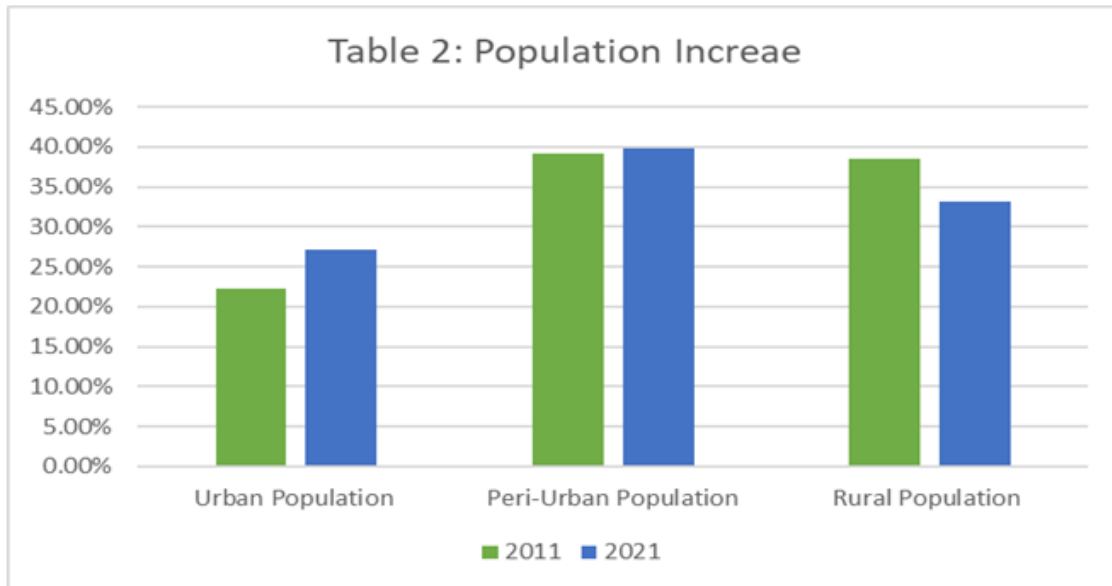
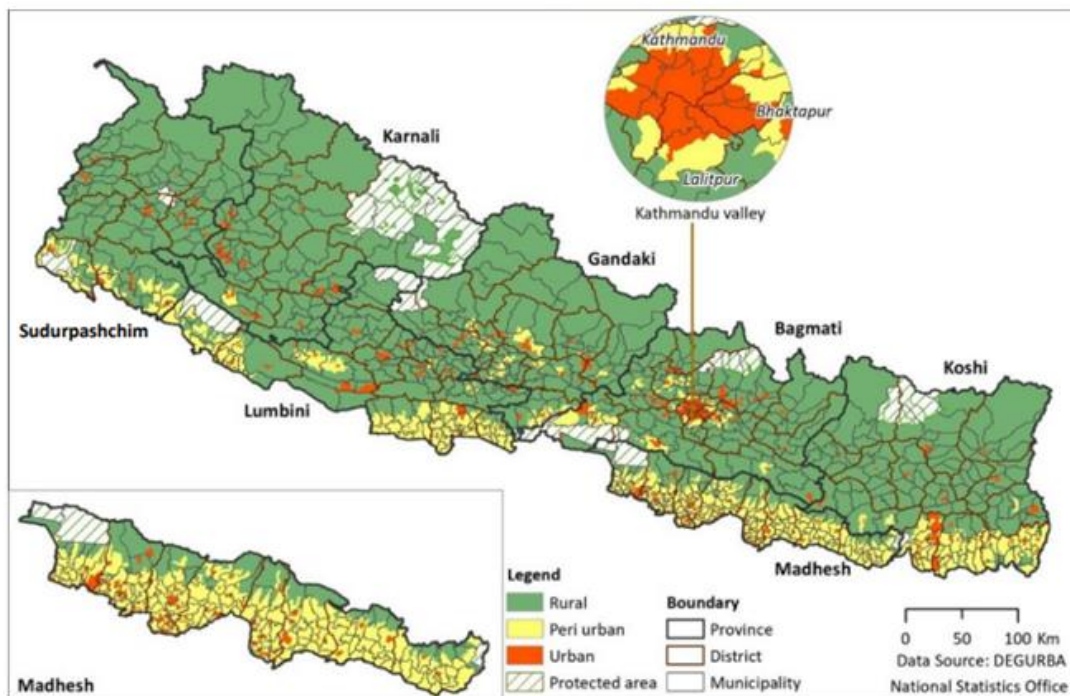


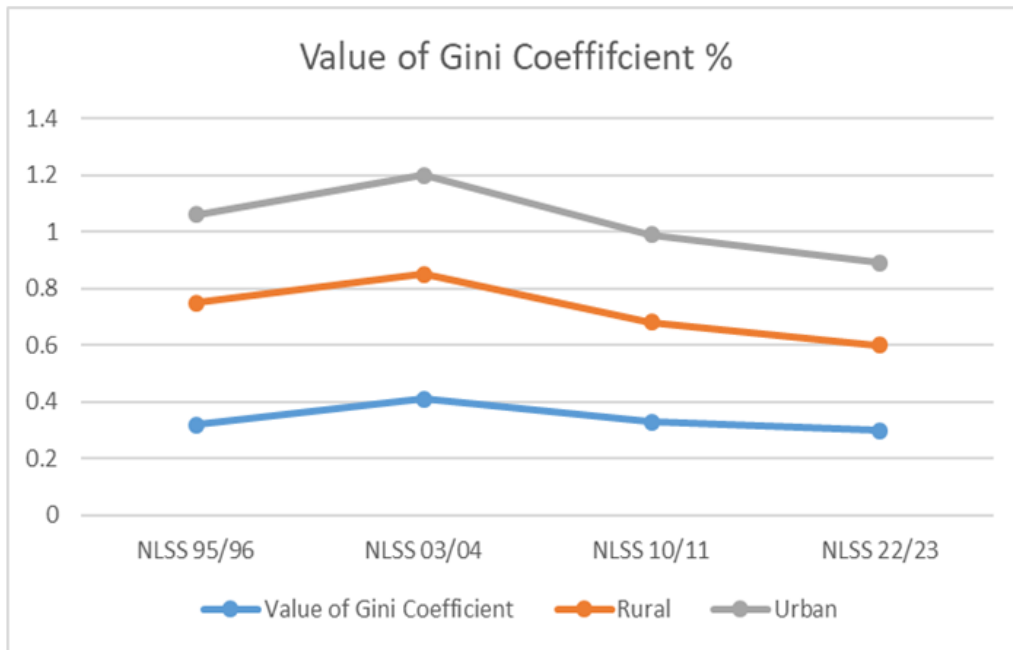
Table 2 shows the increase of Urban, Peri-Urban and Rural population in Nepal during 2011-2021



Map 1 extracted from the “Nepal Population and Housing Census 2021” shows the Degree of Urbanization in Nepal 2021



Line Graph 1 shows the decrease in the value of Gini Coefficient percentage by The NLSS Report, where the Gini Coefficient in Urban areas has always been higher



Bar Graph shows the comparison of income held by different demographic groups of urban and rural regions of different provinces. Taken from NLSS

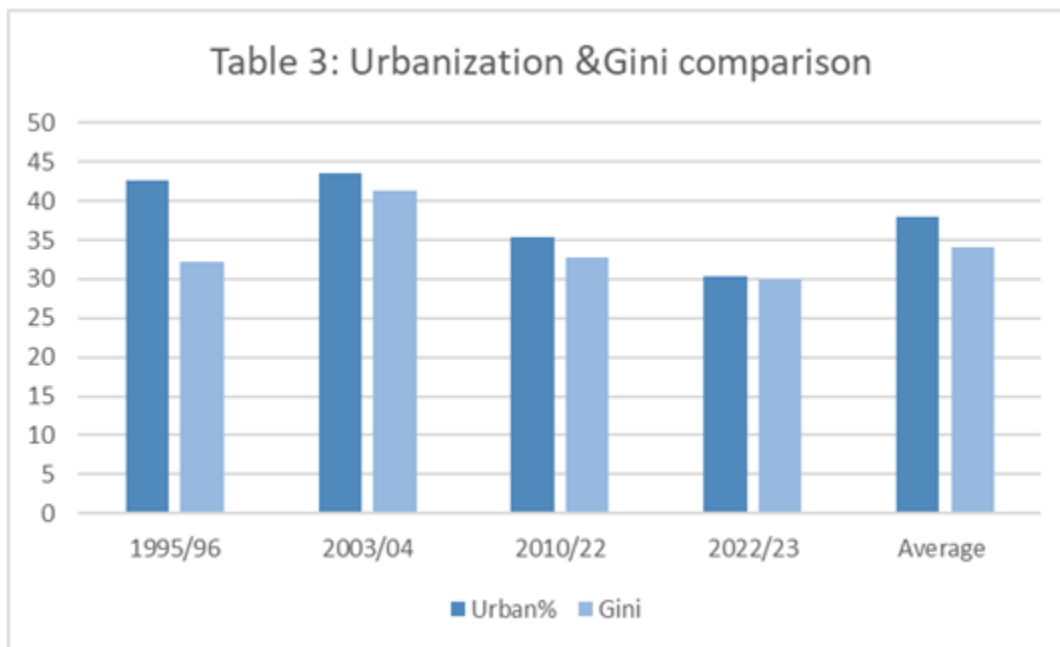


Table 4 shows the comparison of income held by different demographic groups of urban and rural regions of different provinces

Region	Poorest	Second	Third	Fourth	Richest	Total
Nepal	20.0	20.0	20.0	20.0	20.0	100.0
Koshi Urban	16.5	21.4	20.0	23.0	19.2	100.0
Koshi Rural	31.2	23.3	18.5	16.6	10.4	100.0
Madhesh Urban	25.4	30.2	22.6	15.2	6.5	100.0
Madhesh Rural	36.5	26.9	22.6	8.3	5.6	100.0
Kathmandu Valley Urban (KVU)	5.0	7.8	10.9	27.2	49.2	100.0
Bagmati Urban (Except KVU)	12.2	13.5	19.2	25.6	29.5	100.0
Bagmati Rural	28.8	17.7	19.5	15.4	18.6	100.0
Gandaki Urban	5.9	8.7	19.8	27.9	37.8	100.0
Gandaki Rural	11.6	17.6	19.3	21.3	30.2	100.0
Lumbini Urban	13.2	17.2	23.7	24.1	21.8	100.0
Lumbini Rural	25.4	15.4	20.9	19.9	18.4	100.0
Karnali Urban	27.8	23.8	17.9	16.8	13.7	100.0
Karnali Rural	33.8	23.8	18.5	14.8	9.1	100.0
Sudurpaschim Urban	20.4	24.3	22.3	19.4	13.6	100.0

Sudurpaschim Rural	35.0	27.2	21.3	11.1	5.4	100.0
Urban/Rural Summary						
Kathmandu Valley Urban (KVU)	5.0	7.8	10.9	27.2	49.2	100.0
Urban Regions (Except KVU)	17.9	21.5	21.5	21.1	18.1	100.0
Rural Regions	29.4	21.3	20.3	15.4	13.6	100.0

Table 5 shows the HDI of different provinces of Nepal alongside the Urban and Rural HDI values

Area / Province	HDI Value
Bagmati	0.652
Gandaki	0.641
Koshi	0.617
Lumbini	0.608
Sudurpashchim	0.601
Karnali	0.590
Madhesh	0.561
Urban HDI (Nepal)	0.647

Rural HDI (Nepal)	0.561
Nepal (National Average)	0.622

Regression Model

To examine the relationship between urbanization and income inequality in Nepal, a simple linear regression model was used. The model is specified as:

$$i = \beta_0 + \beta_1 \text{Urbanization}_i + \epsilon_i$$

Where:

1. Income Inequality (i) = Gini coefficient
2. Urbanization = percentage of population living in urban areas
3. β_0 = intercept
4. β_1 = effect of urbanization on inequality
5. ϵ_i = error term

Using data from selected survey years (1995/96, 2003/04, 2010/11, 2022/23), the regression coefficients were estimated in Microsoft Excel using the Ordinary Least Squares (OLS) method. The resulting regression equation is:

$$\text{Income Inequality (i)} = 12.9 + 0.56 \times \text{Urbanization}$$

The regression model demonstrates that income inequality in Nepal increases with urbanization. Specifically, a 1% increase in urban population is associated with an increase of 0.56 points in the Gini coefficient, with a baseline value of 12.9. Since the analysis is based on only four observations, The regression is illustrative and exploratory, not inferential, showing the relationship between urbanization and inequality in a simplified way. Descriptive trends support this finding: when urbanization was above average, the Gini coefficient was also high (e.g., 2003/04), while both urbanization and inequality declined after that period (e.g., 2022/23). This depicts a trend, that increased urbanization increases income inequality.

Discussion

A 2023 study in Humanities and Social Sciences Communications finds that rapid and poorly planned urban growth has widened income inequality and reduced life expectancy across the

region. This means that many urban residents face inadequate access to healthcare and nutrition, and can be exposed to unsafe living conditions. These dynamics are reflected in Nepal's relatively low Human Development Index (HDI: 0.622 in 2025) and elevated under-five mortality rates. The trend of urbanization has also been seen to go along quite well with income inequality, especially within developing economies, in cases where growth is uneven. Evidence within South Asia reinforces appreciable increases in inequality due to urban expansion, with sharp increases in Gini coefficients. Inequality in Nepal has widened as economic gains have disproportionately favoured wealthier groups, while urbanization policies have inadequately addressed the needs of the over 20% of the population living below the poverty line. Low-income households allocate a disproportionately large share of their income to rent and food, and rising urban living costs exacerbate their vulnerability. Many delay healthcare or pull children out of school due to low income.

Overall, it emerges from the existing literature that there is a crystal-clear research gap; very limited analytical work focused on Nepal is available with respect to how urbanization shapes income inequality and how access to health, education, and basic services may moderate these effects. This in turn will be important in the design of inclusive urban and social policies in Nepal. Without Nepal-specific evidence, policies may overlook vulnerable urban residents. This increases exclusion from basic services and public support.

Table no. 1 suggests how the average income in urban and rural areas of different provinces varies in Nepal. Residents in Bagmati Province, earn the highest average income compared to other provinces, which can be explained by the general trend of urban areas having more economic opportunities and higher-paying jobs. The gap in income between urban and rural areas in provinces like Koshi, Madhesh, and Karnali might indicate that rural areas are often reliant on agriculture and lower-paying industries. Urban areas on the other hand benefit from sectors like services, commerce, and technology, which typically offer higher wages. Furthermore, we can indicate a clear disparity of income between urban and rural areas of Karnali province, which has a poverty rate of 26.69% (significantly higher than the national average), is primarily driven by extreme geographical isolation, lack of infrastructure, and subsistence-based livelihoods which causes people to earn less. Lower rural incomes force households to rely on migration and borrowing. Many families split across regions to manage costs; members migrate to help their families. This weakens family stability and community life.

(From Table 2) Within this 10-year period (2011-2021), the size of the urban population has drastically increased, showing tendencies for urbanization. While the rural population has reduced, illustrating that many people are willing to migrate to these urban cities. Intense migratory traffic flows to cities like Kathmandu Pokhara and Bharatpur, in search of improved economic opportunities, education, and healthcare. Institutions providing quality healthcare and

education services like Medici and Lincoln School in the Kathmandu valley and Chitwan Medical College and Anukram Academy in Bharatpur do not compromise in delivering quality services. Rapid population growth strains housing and transport systems. Many migrants live in crowded or informal settlements. Daily travel and access to services become difficult. Urbanization tends to increase income inequality, because cities create a higher demand for skilled and better-paid labour but also become unable to address the issues of low-wage employment for unskilled workers.

The above map (Map 1) highlights the numerous degrees of urbanization across different regions in Nepal in 2021 where the red and yellow colours signalize urban and peri-urban areas respectively. From the map, Kathmandu valley stands out to be the most urban city in Nepal. In contrast, more rural areas, particularly in the Far-Western region show a lower degree of urbanization, indicating that the population in these regions is more rural, with limited urban growth. The map highlights the uneven urbanization across the country, with some provinces experiencing rapid growth, while almost 80% of the country remains predominantly rural. This unevenness contributes to regional disparity, leading to densely populated urban places.

(From Line Graph) The Gini Coefficient measures income inequality within a population, with higher values indicating more inequality. The line graph represents the trends in the Gini Coefficient over time. The Gini Coefficient for urban areas is consistently higher than for rural areas, suggesting that income inequality in cities is more pronounced, reported by the NLSS from 4 different time periods. This can be due to urban areas having wealthier segments with large disparities between the high- and low-income class. While rural areas might have people of the same income group, most likely lower income groups, depicting the inequality index as low. Although, it does not mean these areas are developed or wealthy. The decrease in the Gini Coefficient over time suggests that overall income inequality is slowly improving, particularly in urban areas. This slow change can be seen due to Government efforts to reduce poverty and implement social welfare programs could help reduce the income gap. There may also be efforts to improve income distribution in rural areas.

However, while this index appears to gradually fall, it does not necessarily mean it represents equal economic development. Thus, it could also reflect lower income in rural areas, thereby not necessarily leading to better living standards. This is a trend, which shall continue. Therefore, when somebody raises inequality, it is not a policy of urbanization development, but a policy of rural development and opportunities of increasing earnings.

Table 4 shows the national income distribution among the entire populace, representing equivalent amounts of income held by different demographic groups. The table reflects that in the urban area of the Kathmandu valley, the bottom 20% of the population has only 5% of the

income in the region, whereas the top 20% of the people hold half of the income in the region, with about 49.2% of the income. For instance, in rural areas of the Bagmati province, the bottom 20% of the population represent 28.8% of the national income, whereas the upper 20% of the population represent 18.6% of the national income. This indicates clear regional disparity, where urban hubs like the Kathmandu valley have increased income inequality. For those with high incomes, they often out shadow others with low income. Often, such people cannot afford the standard of living even while living in cities that offer quality services. In comparison, since the people living in rural areas do not have enough access to job opportunities, this reflects on the income inequality, with little to no deviation in income earned. This directly ties that urban areas usually have increased income inequality in comparison to rural areas. In other provinces like Gandaki, in urban sections, the bottom and the top 20% of the population represent 5.9% and 37.8% of the income in the area. However, in rural areas, the spread of income is often more balanced, with the bottom and the top 20% of the population representing 11.6 % and 30.2% of the income. It depicts that urban areas have relatively high Gini Coefficients in comparison to rural ones. Low-income urban households often cannot afford decent housing or nutrition. Social exclusion increases when costs rise faster than wages. This affects dignity and well-being.

Table 5 represents the HDI values of the different provinces of Nepal. The urban HDI is an average of 0.647, varied across the different cities. The mean rural HDI value of various regions is 0.561, which also represents the medium level of human development. In this case, there is a drastic difference between the HDI values of both regions, showcasing urbanization has a high impact on the standard of living of both regions. This suggests that urban residents generally earn higher and more stable incomes, while rural populations face limited job opportunities, lower wages, and greater economic vulnerability. Provincial differences further reinforce this inequality. Provinces with major urban centres such as Bagmati (0.652) and Gandaki (0.641) have higher HDI levels, reflecting higher incomes driven by services, tourism, finance, and government jobs. In contrast, provinces like Karnali (0.590) and Madhesh (0.561), which are more rural and agriculture-dependent, show much lower HDI, pointing to lower productivity, informal employment, and restricted access to markets.

These indications provide a signal that urban policy in Nepal has to go beyond city-centered growth towards balanced regional development. Rural infrastructure, decentralized health and education, and availability of jobs might reduce the pressure on migration and income inequalities. Future research could use household survey-level data or even qualitative interviews to understand the interaction between urbanization and income inequality better in Nepal by expanding access to health care, education, and housing.

These research findings are directly linked to the research question in highlighting the aspects of successful urbanization in Nepal in terms of its constant rate and its high correlation with rising

income inequality, particularly in urban conversate data sources used in this research are partly from the secondary sources of NLSS and census reports, which might not capture the informal employment or underreported income, especially in rural and peri-urban areas. There is also no consideration for short-term economic shocks, like that of the COVID-19 pandemic that might have influenced the distribution of incomes. Unrecorded informal work means hardship may be underestimated where many vulnerable households remain invisible in official data.

Conclusion

This research has focused on establishing the existence of the interrelation between urbanization and income inequality in Nepal. regional inequalities, the structure of income distribution, and its impact on the country's overall standard of living have all been assessed. The research findings show that urbanization has improved the overall standard of living in Nepal. However, this process has also created income inequality by concentrating economic benefits among certain groups and regions. For instance, the densely populated and urbanized areas or cities are constantly dealing with the issue of income inequality between the high- and low-income groups.

As Nepal is a developing nation, experiencing economic growth is normal. Urbanization accompanies economic growth, but when such has adverse effects on macroeconomic performance, like income inequality, it might reduce sustainable economic growth. Since people would not be able to consume, invest or spend on final goods and services equitably, purchasing power dynamics in the economy may occur. Therefore, to ensure economic growth in the long run, finding solutions through these papers is critical.

From all the aforementioned analysis, it clearly implies that reducing inequality through concerted efforts requires more than urbanization. To counter this, governments should pursue balanced regional development by investing in rural infrastructure, digital connectivity, and decentralized industrial zones, so that employment opportunities are not confined to urban centres alone. At the same time, inclusive urban policies such as affordable housing, progressive taxation, universal access to public services, and investment in skill development can ensure that the benefits of urban economic growth are more evenly distributed. By aligning urban planning with redistributive economic policies, governments can transform urbanization from a driver of inequality into a tool for inclusive and sustainable economic growth.

The research concludes that urbanization does have some ties to growth in income inequality, urbanization along with other microeconomic and macroeconomic variables, societal values and human psychology also influence income inequality. Increase or decrease in income inequality may also be dependent on the various political uncertainties that Nepal has passed through, affecting both livelihood and the economy. Secondary data do indicate an association between

income inequality and urbanization, it is unclear to say if urbanization is the sole influencing factor for income inequality in developing nations, like Nepal.

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