

An Empirical Analysis of Gross National Income and Gross Savings in India: Since 1950-2021

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Abstract

The relationship between Gross National Income (GNI) and Gross Savings is crucial in understanding a nation's economic health. This study explores the data from India over several decades, showcasing fluctuations and their implications. Between 1951 and 1960, GNI fluctuated with alternating periods of growth and contraction, while savings rose steadily, reflecting a cautious approach to financial management. This trend continued in the 1960s, as savings remained stable despite GNI volatility, signalling a strong saving culture. In the 1970s, GNI experienced significant fluctuations, but savings continued to grow, peaking in 1978 as individuals responded cautiously to slower growth. The 1980s saw generally positive, though volatile, economic growth, with consistent increases in savings, highlighting a focus on wealth accumulation. The 1990s were characterized by two phases: from 1991 to 1995, GNI and savings rose together, but from 1996 to 2000, GNI declined while savings grew, reflecting increased caution. During the 2000s, economic shocks like the 2008 financial crisis caused GNI fluctuations, but savings remained on an upward trend, driven by precautionary measures. From 2011 to 2021, GNI declined, especially in 2020 due to the COVID-19 pandemic. However, savings stayed resilient, indicating a focus on financial security. Overall, savings tended to rise during periods of economic uncertainty. The findings suggest that while higher GNI often correlates with increased savings, other factors such as inflation, policy changes, and external shocks have created periods of divergence. This relationship reflects the broader macroeconomic dynamics impacting both variables.

Key words: Gross National Income, Gross Savings, inflation, external shocks and macroeconomic dynamics.

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Introduction

The relationship between Gross National Income (GNI) and Gross Savings is an essential area of focus for macroeconomic policy and analysis. GNI is a measure that accounts for the total domestic and international income of a nation's residents, while Gross Savings reflects the portion of income that is not spent on consumption. Both metrics are integral to understanding the overall health of an economy, and the interplay between these two indicators can provide insights into investment capacity, financial stability, and long-term growth prospects.

Gross National Income (GNI) and Gross Savings are key indicators of economic development. GNI measures the total domestic and foreign output claimed by residents of a country, while Gross Savings reflect the portion of income not consumed. In the context of India, these metrics reveal insights into economic growth, consumer behaviour, and policy efficiency. As India progressed through different phases of economic liberalization, technological advancements, and global integration, the patterns between GNI and savings have shifted. Understanding the co-movement and occasional divergence between these indicators helps in shaping economic policy.

This work focuses on the saving habits in developing countries, particularly India, and how income distribution, demographic factors, and inflationary expectations affect Gross Savings (Khatkhate D. R., 1980). In economic theory, higher income levels typically enable higher savings. According to Keynesian economics, when incomes rise, households have more disposable income, which leads to increased savings, provided consumption needs are met (Keynes, 1936). This relationship can further be explained by the Life Cycle Hypothesis (Modigliani & Brumberg, 1954), which suggests that individuals save more during their peak earning years to prepare for retirement, thereby correlating higher income with higher savings rates. The dynamics of savings and investment in India, addressing the cyclical trends of national income and savings, and how government policies have influenced this relationship (Chandavarkar, A. 1996). In the context of India, various phases of economic development have influenced the dynamics between GNI and savings. From post-independence through the pre-

liberalization era, India's savings rate was relatively modest due to low-income levels and a primarily agrarian economy (Rangarajan, 1999).

A global analysis of private saving behaviour, focusing on the factors that drive savings in developing economies, including income growth, financial sector development, and fiscal policies. Broader comparative framework for understanding India's savings patterns (Loayza, N., Schmidt-Hebbel, K., and Servén L. 2000). The savings behaviour in developing countries, particularly focusing on income levels, interest rates, and demographic trends. The rising income can lead to increased savings and investment capacity (Stern, N. 2001). However, with the economic reforms of the 1990s, the country experienced rapid income growth, which, in turn, led to a sharp rise in savings (Ahluwalia, 2002). The long-term relationships between saving, investment, and economic growth in India, providing empirical evidence on how increased savings has contributed to capital formation and GNI growth (Athukorala, P., & Sen, K, 2002). The liberalizing trade, financial markets, and reducing government intervention, enhanced economic efficiency, leading to a marked improvement in GNI and the ability to save. The paper explores the transition of India's economic growth from the low "Hindu rate of growth" to the surge in productivity post-liberalization. It highlights the role of increasing income and the surge in national savings in propelling economic growth (Rodrik, D., & Subramanian, A., 2004).

This government report provides a comprehensive analysis of India's macroeconomic trends, with particular emphasis on the patterns of Gross Savings and their relationship with national income over different time periods Gupta, S. P, 2005). In more recent times, global economic shifts, the rise of a robust service sector, and significant foreign investment have further transformed India's GNI and savings landscape. Understanding the relationship between these two variables, and how external factors like inflation, interest rates, and fiscal policies influence them, is critical for designing effective macroeconomic policies that foster sustainable growth (Singh & Srinivasan, 2006). A detailed exploration of savings and investment behaviour in India, this paper offers both theoretical perspectives and empirical evidence, focusing on the correlation between GNI, consumption, and savings over different periods Jha, R, 2007).

This paper discusses the role of financial markets and economic growth in shaping savings rates in India, offering insights into how a rising GNI influences household and national savings (Chhibber, A., & Laajaj R. 2008). The authors analyse India's economic growth before and

after the liberalization reforms in 1991, providing a comparison of GNI growth patterns and how reforms have influenced savings rates (Agarwal, P., & Yadav, S. 2010).

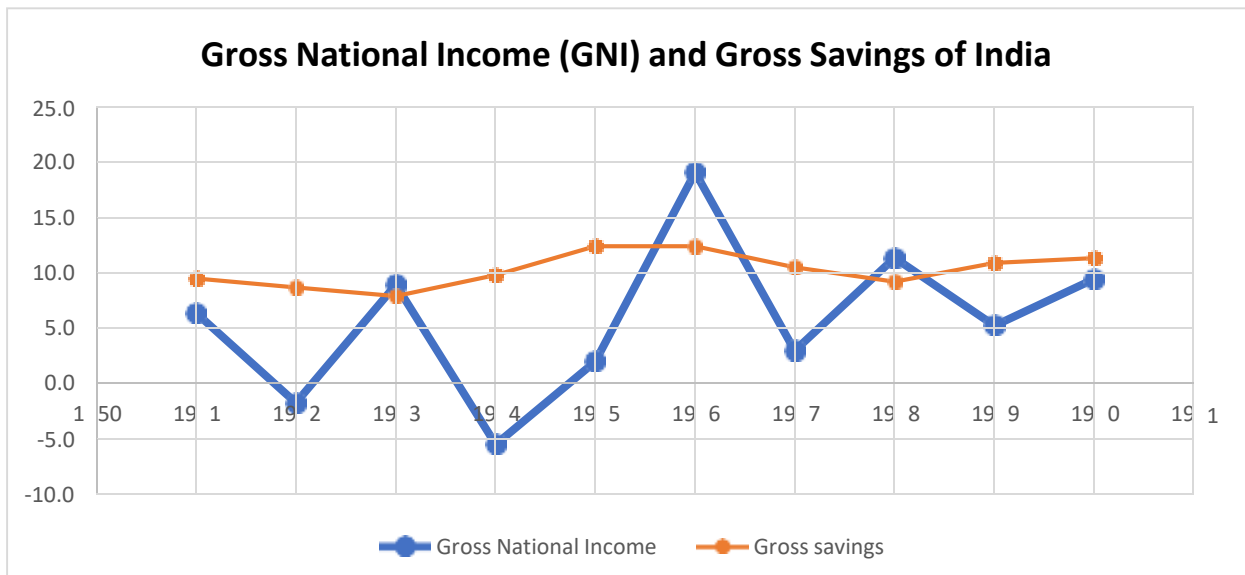
These references will provide a broader theoretical and empirical understanding of the link between GNI and savings in India, and how these indicators interact with policy decisions, financial markets, and global economic conditions.

Gross National Income (GNI) and Gross Savings of India

The provided data contains values of India's Gross National Income (GNI) and Gross Savings from 1951 to 2021. Here's an analytical breakdown of this data over the decades.

Post-Independence Era (1951-1960):

During this period, India's GNI fluctuated significantly, reflecting the challenges of transitioning from a colonial economy. The GNI was positive for most years, though certain years like 1952 and 1954 experienced negative growth (-1.8% and -5.5%, respectively). The savings rate remained relatively low, averaging around 10%, reflecting low-income levels, low disposable incomes, and a primarily agrarian economy. The economic base was still being built, and investment in industry and infrastructure was in its infancy.

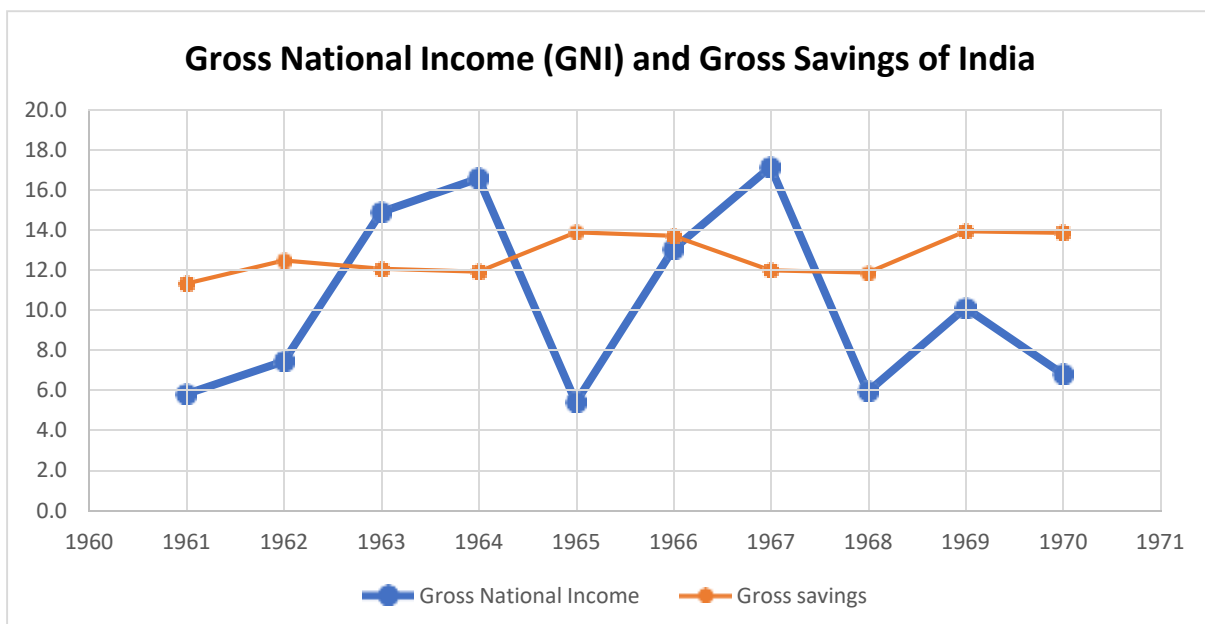


There are significant fluctuations in GNI during this period. GNI starts at 6.4 in 1951, drops to a negative value in 1952 (-1.8), recovers sharply in 1953 (8.9), and again falls in 1954 (-5.5). From 1955 onwards, GNI generally trends upwards, peaking in 1956 at 19.1. The negative

values in 1952 and 1954 suggest economic contractions or downturns, while the high value in 1956 suggests a strong economic recovery. Gross savings generally remain more stable compared to GNI, starting at 9.5 in 1951 and growing steadily with a peak in 1955 and 1956 (12.4). There is a slight dip in savings in 1957 (10.5) and a small recovery in the following years. Even during years of negative GNI (like 1952 and 1954), gross savings remain relatively stable or slightly higher, indicating that savings were not as impacted by GNI downturns in this period.

1960s - Economic Growth with Volatility:

The 1960s saw higher GNI growth rates, particularly in 1963 (14.9%) and 1964 (16.6%). However, this period also included years of low growth, such as 1968 (5.9%) and 1969 (10.1%), illustrating economic volatility. Savings followed GNI trends, with a modest increase in savings rates as incomes grew. However, the increase was not linear, fluctuating between 11.9% and 14.0%. The Green Revolution and early industrial policies helped grow incomes, although savings growth was somewhat limited.

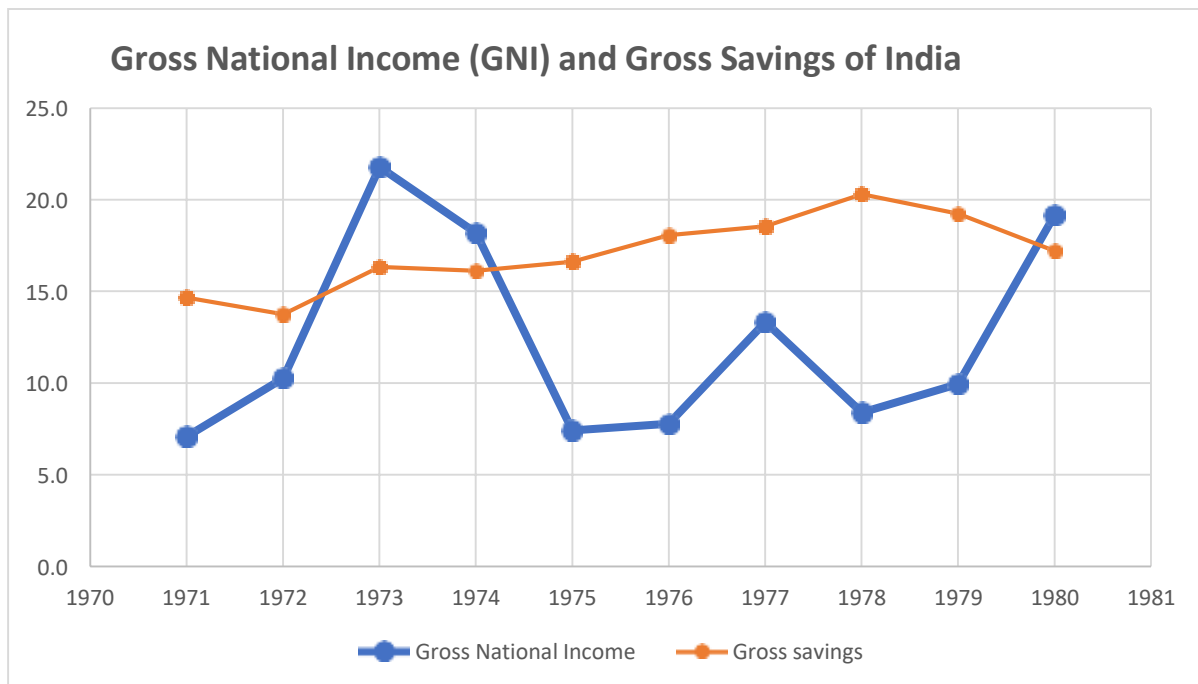


Over this period, GNI fluctuates significantly. It starts at 5.8 in 1961, peaks at 17.2 in 1967, and then declines to 6.8 by 1970. The highest points of GNI occur in 1963, 1964, and 1967, which indicate periods of strong economic growth. However, there are notable dips in 1961, 1965, 1968, and 1970, signalling either economic slowdowns or downturns. Savings rates show

more consistency but fluctuate as well. Starting at 11.3 in 1961, gross savings peak at 14.0 in 1969. The general trend shows that savings tend to increase during periods of economic stability and growth, while during downturns (like in 1967), savings slightly decrease

1970s - High Growth and Rising Savings:

A significant surge occurred in GNI during the 1970s, especially in 1973 (21.8%) and 1974 (18.2%). This was largely driven by structural changes in agriculture and early signs of industrial modernization. Savings also began to rise, with the gross savings rate reaching around 16% by 1975 and 18.6% by 1977. This indicated an increase in disposable income and savings potential, despite economic and political instability. This period marked an improvement in the savings rate in line with higher income levels and economic reforms aimed at industrialization.

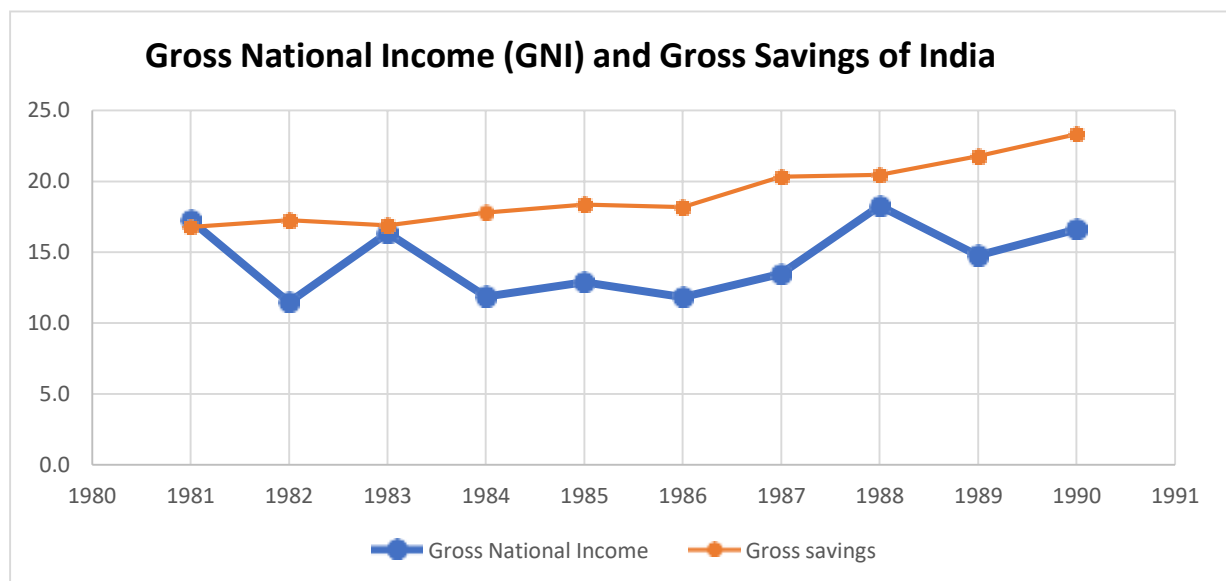


The GNI shows fluctuations with a general upward trend in certain years. It starts at 7.1 in 1971 and reaches a peak of 21.8 in 1973 before falling to lower levels in subsequent years, then reaching 19.2 in 1980. The highest growth occurs in 1973, which signals a period of rapid economic expansion. Between 1971 and 1980, GNI fluctuates, with noticeable declines in 1974, 1975, and 1978. Gross savings show a more consistent upward trend throughout the

decade, starting at 14.7 in 1971 and peaking at 20.3 in 1978. There is a slight drop in savings in 1980 to 17.2. The increase in savings over time suggests an accumulation of wealth and prudent financial management during periods of both moderate and high growth.

1980s - Consistent Growth and Increasing Savings:

The GNI during the 1980s maintained positive growth, with peaks in 1981 (17.2%) and 1988 (18.3%). The economy saw more stability, with sustained industrial output and early liberalization efforts. Savings rates saw steady growth, exceeding 20% by 1987 and reaching 23.3% by 1990. The increased savings reflected growing confidence in the economy and a rise in disposable incomes. This decade saw steady economic expansion, driven by public sector growth and higher investment, translating into higher savings rates.

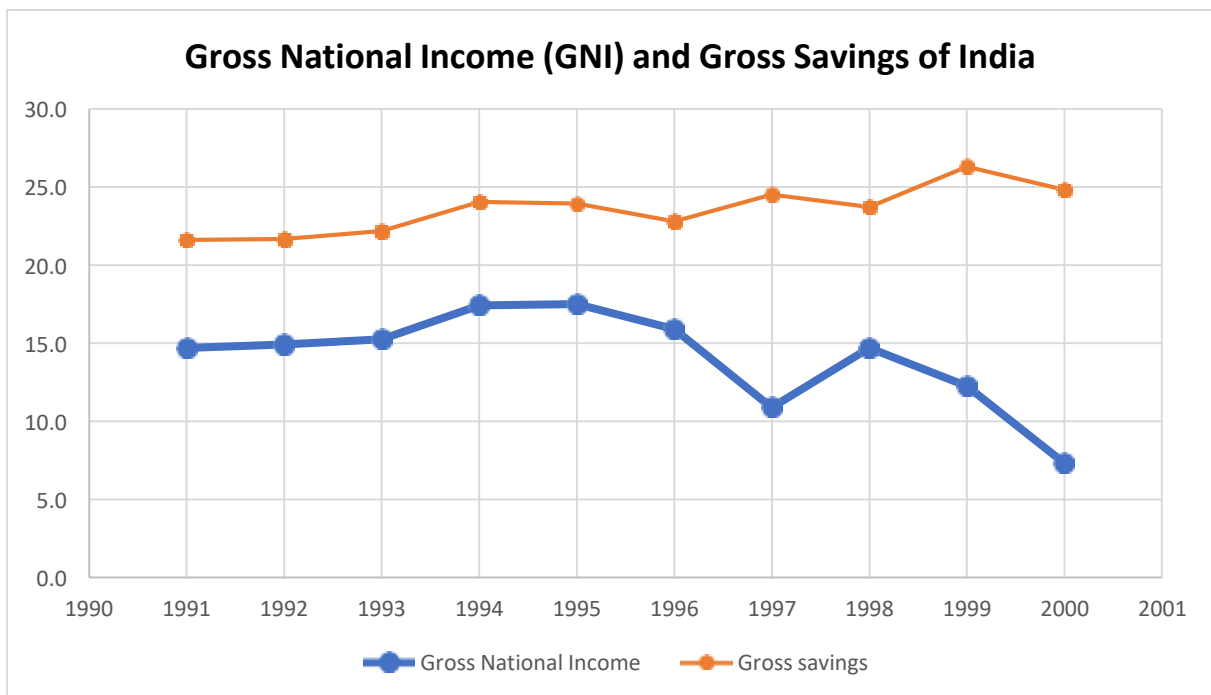


The GNI fluctuates across the decade, with highs and lows but showing a general growth trend towards the end. It starts at 17.2 in 1981, falls to 11.5 in 1982, and then fluctuates until it rises again to 16.6 by 1990. The highest GNI is recorded in 1988 at 18.3, indicating a period of strong economic performance. Gross savings follow a steadily increasing trend throughout the decade, rising from 16.8 in 1981 to 23.3 in 1990. This continuous upward trajectory in savings

reflects increasing wealth accumulation and potentially more conservative financial behaviour as the years progress.

1990s - Liberalization and Economic Transition:

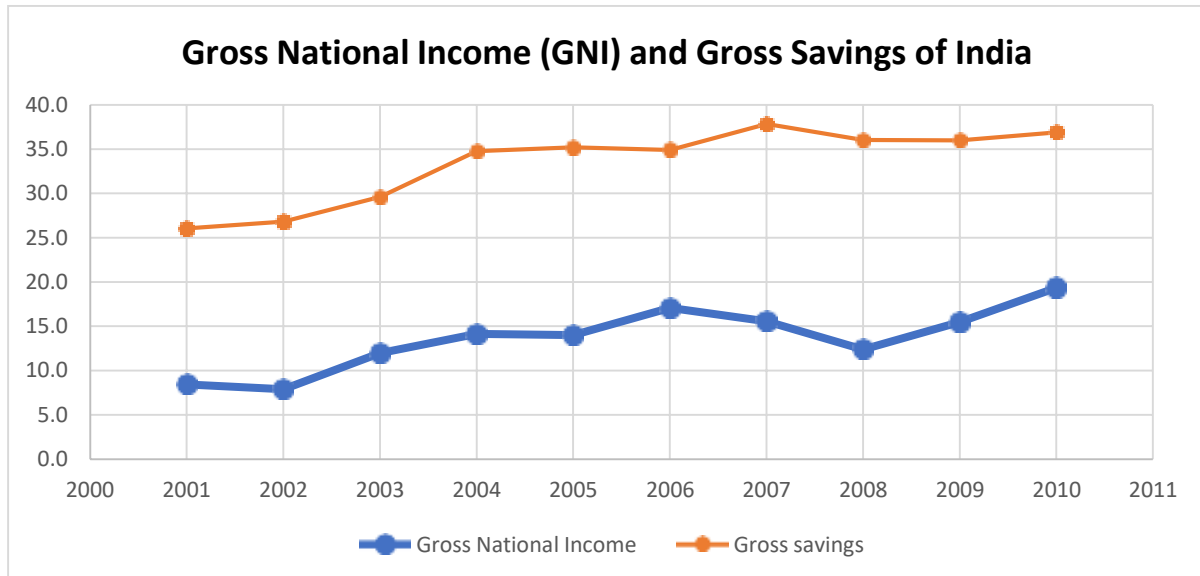
After liberalization in 1991, India’s GNI growth picked up, reaching 17.4% by 1994. However, it remained volatile due to economic reforms that disrupted traditional industries and trade practices. Savings rates grew steadily, peaking at 26.3% in 1999. Economic reforms led to greater financial liberalization, which encouraged both private and corporate savings. Economic liberalization opened up the Indian economy to global markets, leading to increased income and savings.



GNI shows considerable fluctuation during the 1990s. It starts at 14.7 in 1991, peaks at 17.5 in 1995, and then gradually declines to a low of 7.3 in 2000. The GNI experiences an upward trend in the first half of the decade, but it deteriorates in the latter half. Gross savings increase steadily over most of the decade, with values ranging from 21.6 in 1991 to 26.3 in 1999. The savings rate reaches its highest level in 1999 and then slightly declines to 24.8 in 2000.

2000s - Rapid Economic Growth and High Savings:

The GNI during this period saw rapid growth, peaking at 19.3% in 2010. This period coincided with India’s IT and services boom, rapid industrial growth, and a growing middle class. Savings reached their highest levels, hitting 37.8% in 2007. The savings boom was driven by higher corporate savings, increased household incomes, and significant economic expansion. The 2000s saw the most rapid economic growth, and savings rates were at their highest as both household and corporate sectors thrived.

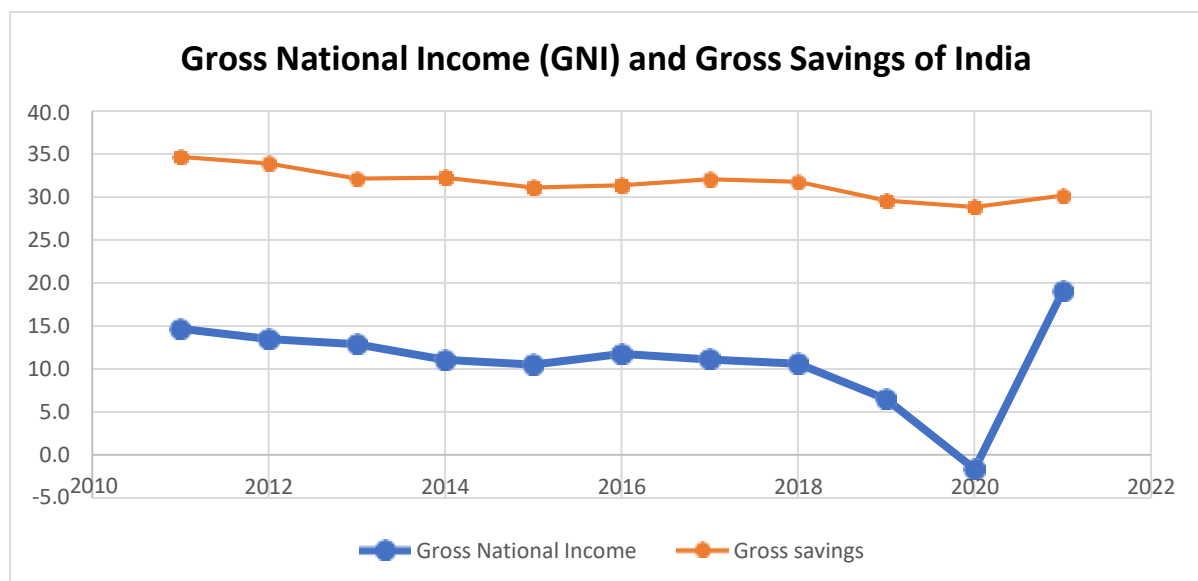


GNI fluctuates over this period, starting at 8.4 in 2001, reaching a peak of 19.3 in 2010. There is a general upward trend in GNI, indicating growth in national income over the decade, with some notable dips, particularly in 2008 (12.4). Gross savings show consistent growth throughout the period, starting at 26.0 in 2001 and increasing to 36.9 by 2010. Savings rise steadily without any significant downturn, indicating a propensity toward greater savings during this time.

2010s - Growth Slows, Savings Decline:

The GNI growth began to slow after 2011, dipping below 13% by 2013 and continuing to decline. This slowdown was partly due to global economic conditions, domestic policy challenges, and a shift towards service-led growth. Savings began to decline after 2010, reaching around 32.1% by 2017. Slower growth, rising inflation, and structural changes in the economy contributed to this decline. After a period of rapid expansion, the economy began to cool down, and savings rates fell in tandem with slower income growth. The data shows a steep

decline in GNI in 2020 (-1.6%), reflecting the impact of the COVID-19 pandemic and subsequent economic lockdowns. However, by 2021, GNI rebounded strongly to 19.1% as the economy reopened and recovered. Savings fell to 28.8% in 2020 but slightly recovered to 30.2% in 2021. The dip in savings can be attributed to economic uncertainty, job losses, and reduced disposable income during the pandemic. The global pandemic caused a sharp contraction in economic activity, but the economy showed signs of recovery in 2021, though savings remained below pre-pandemic levels.



GNI starts at 14.7 in 2011 and fluctuates downward until it hits a significant low of -1.6 in 2020, likely due to the impact of the COVID-19 pandemic. It then sharply rebounds to 19.1 in 2021, reflecting a strong recovery from the pandemic-induced economic crisis. Gross savings exhibit a general downward trend over the decade, starting at 34.6 in 2011 and ending at 30.2 in 2021, despite some fluctuations. The lowest point is 28.8 in 2020, during the pandemic, followed by a slight increase in 2021.

Conclusion

The relationship between Gross National Income (GNI) and gross savings, revealing the significant impact of economic fluctuations on saving behaviour. While GNI experienced periods of both growth and decline, savings generally exhibited a more stable, upward trend. During times of economic uncertainty, such as recessions and financial crises, individuals responded with increased savings, demonstrating a precautionary approach to financial security. Throughout the decades, savings consistently grew, even when GNI was volatile,

indicating a strong cultural emphasis on saving as a buffer against economic instability. This pattern persisted across various economic shocks, including the 1970s' fluctuations, the recessions of the 1980s and 2000s, and the COVID-19 pandemic in 2020. The consistent rise in savings despite economic downturns underscores a cautious, adaptive financial response to fluctuating incomes. By the end of 2021, the economy showed signs of recovery, but the modest rise in savings suggests that the caution developed over decades remained ingrained. Overall, the relationship between GNI and savings reveals a pattern of prudence, with individuals tending to save more during uncertain times and exercising caution even during recovery periods. The consistent rise in savings across the decades underscores a focus on long-term financial security, regardless of economic fluctuations, suggesting a deep-rooted culture of precautionary saving in response to both immediate and anticipated risks.

Bibliography

- Keynes, J. M. (1936). *The General Theory of Employment, Interest, and Money*. Macmillan.
- Modigliani, F., & Brumberg, R. (1954). Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data. In K. K. Kurihara (Ed.), *Post-Keynesian Economics* (pp. 388-436). Rutgers University Press.
- Khatkhate, D. R. (1980). *Savings in Developing Countries: Insights from India*. *World Development*, 8(7-8), 543-556.
- Chandavarkar, A. (1996). *Savings and Investment in the Indian Economy*. Reserve Bank of India Bulletin, 50(7), 231-250.
- Rangarajan, C. (1999). *Indian Economy: Essays on Money and Finance*. UBS Publishers.
- Loayza, N., Schmidt-Hebbel, K., & Servén, L. (2000). *What Drives Private Saving Across the World*. *The Review of Economics and Statistics*, 82(2), 165-181.
- Stern, N. (2001). *The Determinants of Savings in Developing Countries*. *Journal of Development Economics*, 5(4), 87-109.
- Ahluwalia, M. S. (2002). Economic Reforms in India since 1991: Has Gradualism Worked? *Journal of Economic Perspectives*, 16(3), 67-88.
- Athukorala, P., & Sen, K. (2002). *Saving, Investment, and Growth in India*. *Oxford Development Studies*, 30(3), 293-311.
- Rodrik, D., & Subramanian, A. (2004). *From Hindu Growth to Productivity Surge: The Mystery of the Indian Growth Transition*. *IMF Staff Papers*, 52(2), 193-228.
- Gupta, S. P. (2005). *The Indian Economy: An Overview of Savings and Growth Patterns*. *Economic Survey of India*, Ministry of Finance.
- Singh, N., & Srinivasan, T. N. (2006). *Indian Federalism, Economic Reform and Globalization*. World Bank.

- Jha, R. (2007). *Consumption, Savings, and Investment: Theory and Evidence from India*. Indian Economic Review, 42(1), 1-28.
- Chhibber, A., & Laajaj, R. (2008). *Economic Growth and Poverty Reduction in India: The Role of the Financial Sector*. Indian Journal of Economics, 89(357), 25-44.
- Agarwal, P., & Yadav, S. (2010). *Economic Reforms and National Income: A Comparative Study of Pre and Post-Reform India*. Economic and Political Weekly, 45(19), 72-80.
- United Nations Statistics Division. (2021). National Accounts Official Country Data. [Link]
- World Bank. (2021). Gross National Income Data. [Link]
- (2021). Annual Report. [Link]
- T. R. Vignesh, R. Mayandi, and B. Nachiappan, "Web as a Strategy Tool for Development of E-Tourism in India," International Research Journal of Education and Technology (IRJEdT), vol. 1, no. 5, pp. 6-11, Jan. 2021.
- A. Islam and B. Nachiappan, "Digital Technology and Distraction of Digital Classroom," International Research Journal of Education and Technology (IRJEdT), vol. 1, no. 5, pp. 101-106, Jan. 2021.