

# Analysis of Trends of Natural Rubber prices and overview in Nigeria, Thailand, Malaysia, Indonesia, United States, and Europe

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Research Article

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### ABSTRACT

*Natural Rubber (NR) is cultivated commercially in Asia (Malaysia, Indonesia, Thailand, Sri Lanka, China, Cambodia, Singapore etc), Europe, and Africa (Nigeria, Cote d' Ivoire etc). Due to many factors, investigation has revealed significant imbalances in demand and supply, leading to significant variations in the prices of rubber products among major producing regions in the World. This study was undertaken to collect scarce information on prices of natural rubber and determine the trends in the prices of rubber from year 2001 till date. Secondary data were collected from reputable journals, internet, and reports of international rubber organizations including Food and Agricultural Organization of the United Nations (FAO), US Consumer Price Index, Singapore Commodity Exchange (SCOM), International Rubber Study Group (IRSG), as well as literature, and sites related to the research. Primary data were collected from RRIN's archives, records etc and supplemented the secondary data. Quantitative data were collected on the basis of information available in Thailand, Malaysia, Indonesia, Nigeria, USA, New York, London etc and spanned from 2001 to 2025. The basic data generated and the variables affecting prices of natural rubber across producing regions were analyzed using descriptive analysis. The results revealed significant variations in prices of NR within and among the continents under investigation. It can therefore be concluded that price of rubber over the years was dwindled, and thus could discourage farmers from going into rubber farming. The authors therefore recommended that government provides market information and prices of rubber to farmers on a yearly basis. Provision of meteorological data to rubber farmers in the wake of climate change, together with strong leadership in rubber industries, is also recommended. All these will help smallholder farmers to plan ahead and address challenges like price volatility etc.*

**Keyword:** Europe, Indonesia, Malaysia, Natural Rubber, Nigeria, Thailand, Variations in prices,

USA.



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### INTRODUCTION

Natural rubber is an important agricultural commodity of economic importance (Ambali and Momoh, 2012) which is extremely used as raw material in various industries for tire manufacturing, toy making, and manufacture of rubber

based surgical equipment. The increasing trend in Natural Rubber (NR) prices over the past years is due to the world's steady NR demand and persistent NR supply tightness. The supply tightness is mainly due to highly

variable, unpredictable, and (in some regions) unfavourable climates for rubber cultivation.

Natural rubber is high resilience, extremely waterproof, and stretchable material, which is used extensively in many applications and products, either alone or in combination with other materials. The biggest producers of rubber are China, Indonesia, Malaysia and Thailand. Others include Papua New Guinea, Philippines, Singapore, Sri Lanka, Vietnam, Cambodia, and India. Rubber prices are available on several exchanges including Singapore Exchange (SGX), the Malaysian Rubber Exchange, Osaka Exchange, US Consumer Price Index, and the Shanghai International Energy Exchange. Although, there is no significant production of natural rubber tree in the United States due to the unsuitable climate for the rubber tree, the Great Lake region is a hub for rubber manufacturing in the US driven by a strong industrial ecosystem and proximity to major Automakers. Some desert States and greenhouses have grown rubber trees primarily reliant on imports from countries like Thailand and Indonesia. Some companies involved in rubber trade include: Goodyear tire, Dunlop, Michelin etc. The current world consumption of rubber, totaling around 18 million tonnes per year, consists of 48% natural rubber (NR), 20% solid SBR, 14% latex SB, 12% polybutadiene, 5% EPDM, 2% polychloroprene, 2% nitrile and 7% other synthetics. Thus, in terms of quantity by type, NR is the largest.

Natural rubber, is consumed as an industrial raw material. In rubber articles, 70% of NR and 60% of synthetic rubber (SR) have been manufactured into automotive tires. However, natural rubber is unique as it is consumed as an industrial raw material but produced as an agricultural commodity, and now over 80% being sourced from independent smallholders. Consequently, it becomes a social commodity where more than 30 million small farmers are at stake worldwide.

The global economic slowdown has obviously affected natural rubber demand greatly, resulting in lowest ever market prices in the past 30 years. Reduced demand was exacerbated by increased supply from South East Asia, most remarkably from Vietnam which in the last six years had doubled its production from 155,000 tonnes in 1995 to 320, 000 tonnes in 2001.

Today, Natural Rubber (NR) is one of the largest industrial products in the world and it is an indispensable sub-sector in the modern technology. This paper therefore attempts to examine the trends in global prices of Natural Rubber over the years and review available information on price volatility in order to enable rubber farmers have access to market information and plan ahead and address challenges like price volatility etc.

## Objectives

The objectives of the study were:

1. To collect scarce information on prices of natural rubber across selected regions.

2. To determine the trends in the prices of rubber within the period covered in the research.
3. To review available information on price volatility.
4. To help smallholder farmers have access to market information in order to plan ahead and address challenges like price volatility etc.

## MATERIALS AND METHODS

Primary and secondary data were collected for this study. Secondary data were collected from the main producing countries namely Thailand, Indonesia, Malaysia etc. The regions were purposely selected taking into considerations that the regions produce the largest natural rubber globally. The data were collected from reputable journals, internet etc. Data collection techniques were carried out by tracing data and documents that were stored by agencies including reports of international rubber organizations - the International Rubber Study Group (IRSG) -, Singapore Commodity Exchange (SICOM) - previously SACOM Bloomberg, Rubber Association of Singapore -, Food and Agriculture Organization of the United Nations (FAO), US Consumer Price Index, as well as literature, and sites related to this research. The quantitative data collected spanned from 2001 to 2025.

Primary data were collected from RRIN, which complemented the secondary data, and information provided from compilation and processing of commercial data officially reported for the country Nigeria (i.e. Government agencies, external trade bodies, and publications). Overall, the data generated were derived through weighted average purchase prices in local currencies of the producer countries, some consuming countries (New York, London etc) and also reported in US dollars. Some of the basic data were analyzed critically, based on the results obtained, using descriptive analysis to determine variables affecting prices of natural rubber.

## RESULTS

The results of price movement and trend analysis of rubber in the different regions across the World (Europe, Malaysia, USA, and Nigeria) are shown in Tables 1 to 4, Figures 1 to 4, and other regions (Figures 5 to 10) indicating that price fluctuations significantly in all the countries and across the years. According to Budiman (2025), rubber prices have been on a declining trend since 1995 as a result of global stocks rising high.

Key factors are responsible for driving price variation especially low prices of rubber. For example, global rubber prices fluctuate significantly due to shifting supply as a result of weather i.e. changing climates disrupt yields and create instability (e.g. droughts in Southeast Asia – Thailand, Malaysia – reduce output). Export controls by major producers can tighten supply and raise prices. Other factors include production policies, crude oil prices that affect synthetic rubber and hence influence natural rubber prices, and demand – e.g. rising in automotive and

manufacturing of electric vehicle – as witnessed in China causing regional variations and general market volatility. It has been reported that the fundamental factors influencing rubber prices are demand and supply (Harahap and Bhima (2018). When the demand for rubber is lower than the supply, prices can fall. Consequently, a reduction in global stock will have a positive effect on prices. However, there are some instances when a decline in World Stock has not led to a rise in prices but rather a fall in prices. Actually, in mid-2025, prices fell due to ample supply and slower Chinese demand, despite rising overall global demand. There are other issues including under reporting of outputs.

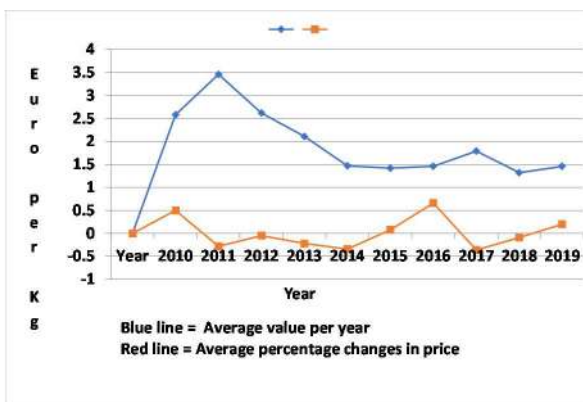
### Europe

The price of rubber inclined from 2010 to 2011, probably due to strong buying interest in the markets. Soon, the momentum fizzled out and the price dropped sharply from 2011 to 2013. This might be due to favourable weather conditions which led to bumper harvest resulting in drastic increase in the supply. Increased harvest coupled with slumping demands led to decline in the price of rubber. From 2013 to 2016, the price remained relatively constant, but rose a little in 2017 and decreased thereafter. However, the trajectory again increased steadily towards 2019. The average percent change in price is shown in Table 1 with the peak changes occurring from 2015 to 2017 (Figure. 1).

**Table 1: Rubber-Annual Price (Euro per Kg) – Commodity prices-price Charts and Data**

Year	Average value per Year	Average percentage change in price
2010	2.58	0.50
2011	3.46	-0.28
2012	2.62	-0.05
2013	2.11	-0.22
2014	1.47	-0.34
2015	1.42	0.08
2016	1.46	0.66
2017	1.79	-0.36
2018	1.32	-0.09
2019	1.46	0.20

Source: Singapore Exchange Ltd (SGX previously SACOM) Bloomberg Rubber Association of Singapore Commodity Exchange.



**Figure 1: Rubber-Annual Price (Euro per Kg) – Commodity prices-price Charts and Data**

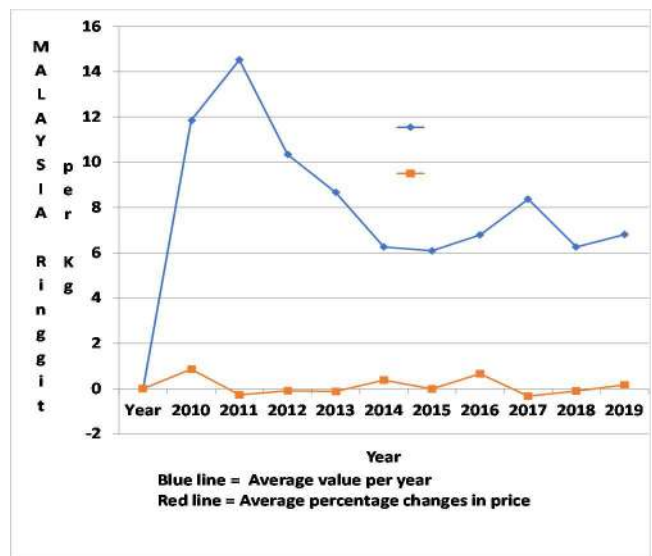
### Malaysia

The trends in rubber prices were somewhat similar to the trajectory of the European counterpart. The prices increased from 2010 to 2011 and sharply dropped from 2012 to 2014 probably due to the buyers who were cautious and waited for the price to fall. Nonetheless, the price stabilized a little but fell in the year 2019. The oversupply of rubber in Malaysia and other major producing countries contributed to the softness in global rubber prices which in turn affected the Europe markets. This situation put pressure on the market leading to some reductions in prices for rubber, especially with the growing supply from Malaysia. The average percent change in price was fairly constant (Table 2 and Figure.2).

**Table 2: Rubber-Annual Price (MALAYSIA Ringgit per Kg) – Commodity prices-price Charts and Data**

Year	Average value per Year	Average percentage change in price
2010	11.85	0.86
2011	14.52	-0.27
2012	10.34	-0.09
2013	8.67	-0.12
2014	6.26	0.38
2015	6.09	-0.01
2016	6.79	0.66
2017	8.37	-0.33
2018	6.26	-0.1
2019	6.81	0.17

Source: Singapore Exchange Ltd (SGX previously SACOM) Bloomberg Rubber Association of Singapore Commodity Exchange.



**Figure 2: Rubber-Annual Price (MALAYSIA Ringgit per Kg) – Commodity prices-price Charts and Data**

### United States

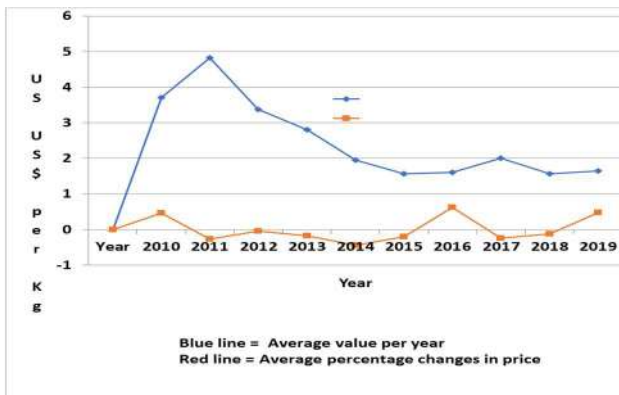
From 2010 to 2011 the rubber prices in the United States increased, while the rubber prices faced downward pressure from 2013 to 2016 probably due to a bumper harvest in key producing countries especially

Thailand, Indonesia, Vietnam, Malaysia etc, which resulted in a large supply of rubber. This downward movement aligned with global trends of weakening demand and oversupply (Onubuoga and Onyeneke 2012). From 2016 to 2017, the prices remained relatively stable but faced slight decrease towards 2019 (Table 3 and Figure 3).

**Table 3:** Rubber-Annual Price (US US\$ per Kg) – Commodity prices-price Charts and Data

Year	Average value per Year	Average percentage change in price
2010	3.71	0.46
2011	4.82	-0.27
2012	3.38	-0.05
2013	2.8	-0.18
2014	1.95	-0.44
2015	1.57	-0.21
2016	1.61	0.62
2017	2	-0.25
2018	1.57	-0.13
2019	1.64	0.47

Source: Singapore Exchange Ltd (SGX previously SACOM) Bloomberg Rubber Association of Singapore Commodity Exchange.



**Figure 3:** Rubber-Annual Price (US US\$ per Kg) – Commodity prices-price Charts and Data

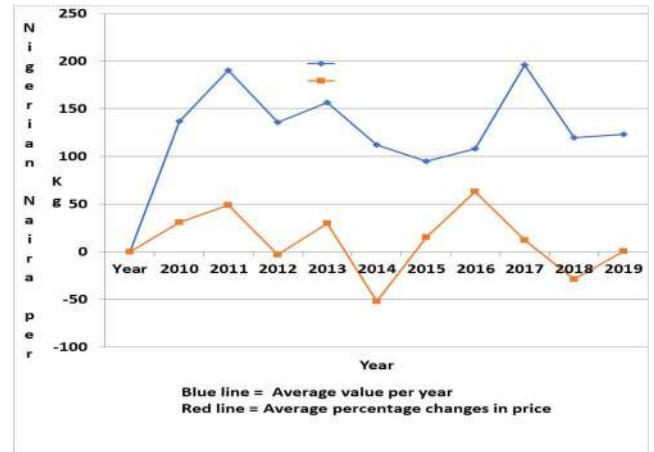
**Nigeria.**

The Nigerian market trends were in line with the global rubber industry. The price, after an initial increase, from 2010 to 2011, witnessed a declining trend indicating that the rubber industry is likely to face somewhat bumper harvest, but oversupply will likely affect the pricing fundamentals (Cashin *et al.*, 2002). The average percent change in price followed a similar trend as the average value per year, but was fairly constant (Table 4 and Figure.4).

**Table 4:** Rubber-Annual Price (Nigerian Naira per Kg) – Commodity prices-price Data

Year	Average value per Year	Average percentage change in price
2010	137.08	30.83
2011	190.42	49.25
2012	136.25	-3
2013	156.91	30
2014	112.5	-52
2015	95	15
2016	108.18	63
2017	196.36	12
2018	120	-29
2019	123.64	0.64

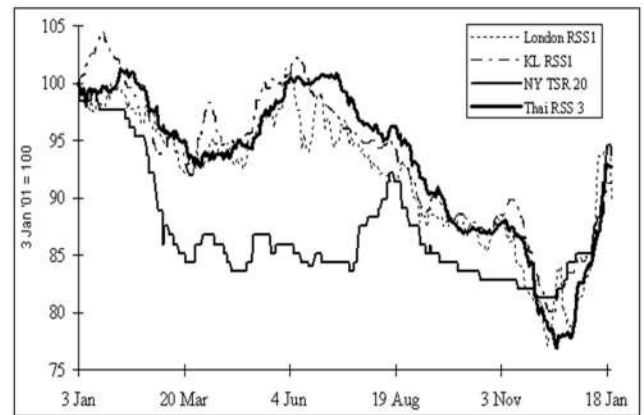
Source: RRIN: Unpublished Data.



**Figure 4:** Rubber-Annual Price (Nigerian Naira per Kg) – Commodity prices-price Data

**Thailand**

In 2001, Thai RSS 3 fell by the biggest margin of the four NR prices tracked, while, surprisingly, Indonesian TSR 20, as proxied by New York TSR 20, fell by the smallest margin. The overall downward trend was the result of an imbalance in the rubber industry, which towards the end of the year 2001 was made worse by the actions of the intervention scheme of Thailand (Figure. 5). Weather, seasonal factors and currency movements, however, ensured a brief interruption to the downward trend. The short-term price rally was most visible between late-March and mid-July. One of the features of 2001 was the resilience of the Indonesian rubber price to downward pressures as it established a floor early in the year.



**Figure 5:** Physical prices, 1 Jan '01-21 Jan '02 Sources: A.F.S. Budiman, IRSG

**Indonesia**

During mid-December 2001 to the third week of January 2002, Sumatra, the main rubber producing area of Indonesia, suffered from heavy rain which resulted floods and the combined effects led to temporary shortage of rubber in the market.

Indonesian Rupiah relative to currencies in other producing countries encourages an increase in exports and output from Indonesia and hence a rise in world NR supply. The annual average prices of RSS1 in New York and London since 1900 indicated that prices in both markets improved in 2000 before falling again in 2001 (Figure 6). It can be seen from Figure 6 that, comparing 1999 and 2001 (two separate years of falling prices), the average London price in 2001 is 469.8 £/tonne, which is slightly higher than 446.4 £/tonne, the average for the whole year of 1999 - the lowest levels since 1975. However, New York prices, for the same period are lower at 746.5 US\$/tonne in 2001 compared to 808.2 US\$/tonne in 1999, but 2001 prices are still higher than the average price of 658.9 US\$/tonne in 1975. Therefore, in New York, at least, rubber prices are now at their lowest levels for about thirty years.

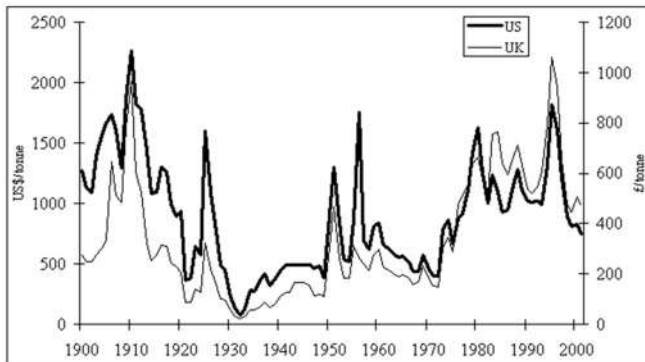


Figure 6: RSS1 prices in New York and London, 1960-2001  
Sources: A.F.S. Budiman, IRSG

Figure 7 illustrates RSS1 prices in US\$/tonne deflated by the US consumer price index (1990=1000) indicating that the rubber price has fallen from over 2,500 US\$/tonne in 1960 to just over 600 US\$/tonne, in 1990 values. This means that NR producing countries are worse off than ever, with prices having been following a continuous downward trend over the past forty years.

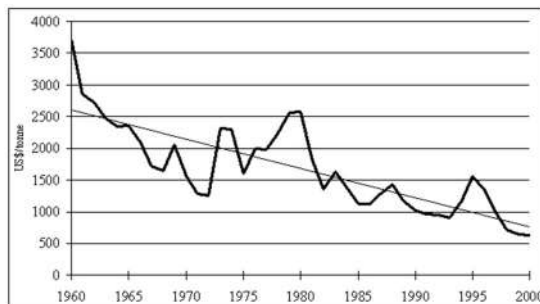


Figure 7: US RSS1 price deflated by 1990 US consumer price index, 1960-2000  
Sources: A.F.S. Budiman, IRSG

### The Effects of Currency Movements

Changes in relative exchange rates can affect rubber prices directly or indirectly as NR is normally purchased

from one country in a given currency for use or resale in another country with a different currency, meaning that in the short-term, rubber prices could increase or decrease depending on movements in currencies. For instance, a 10% decline in £/Ringgit or £/US\$ leads to about a 2% rise in the London price, a 10% rise in the US\$/Ringgit leads to only less than half a percentage fall in the New York price, and a 10% appreciation of the US\$ to SDR leads to a rise of 2.5% in an average of rubber prices. Figure 8 illustrates the trend of the price of RSS1 in Malaysian Ringgit and US\$/SDR rate from Jan '92-Oct '01.

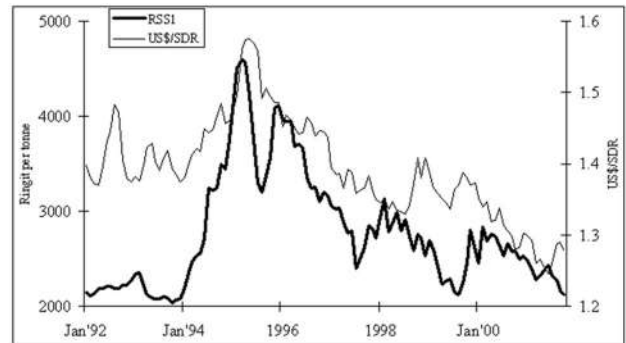


Figure 8: Rubber price and currency movements  
Sources: A.F.S. Budiman, IRSG

The currencies of some NR producing countries, Thailand, Indonesia, Malaysia, and until recently Nigeria have all weakened against the US dollar in the past three to four years. This implies that farmers and exporters in the four countries have been receiving higher income, in their own currencies, without any change in rubber prices or even with a decline in prices. Figure 9 shows the New York TSR 20 price measured in US\$ per tonne and the annual moving average of global NR stocks in thousands of metric tonnes. As is evident, the decline in stocks in 1993-94 led to a rise in rubber prices. The relatively sharp rise in prices during this period was intensified by other factors, particularly speculative activity in rubber futures markets. The long run rise in rubber stocks led to a continuous fall in rubber prices during 1995-99. Then, when stocks were about to reach the peak towards the end of 1999, prices rose again and this is to be expected in a normal market.

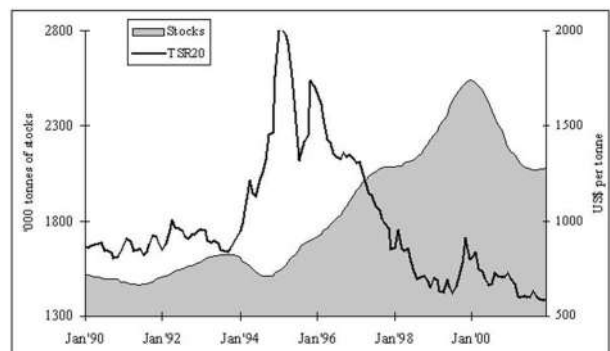


Figure 9: World NR stocks and rubber prices  
Sources: A.F.S. Budiman, IRSG

The puzzling period has been 2000-01 when the decline in world stocks has not led to a rise but rather a fall in prices.

Also, stock figures, as shown in Figure 9, have already taken into account the possible underreporting of output, and global NR production and stocks are still being underestimated in countries like China, Vietnam and perhaps, in Indonesia.

### Natural Rubber Prices Across Regions

In Figure. 10, it was observed that regional gaps e.g. high in Northeast Asia, Malaysia, North America/Europe, Southeast Asia were due to local logistics, costs, exchange rate changes affect purchasing power, and international price competitiveness resulting to peak prices in Northeast Asia and Malaysia.

Southeast Asia, being the largest producer, experienced moderate price movements due to stable harvest output. Conversely, Northeast Asia recorded higher prices, than the other regions, driven by increased industrial demand and logistical constraints.

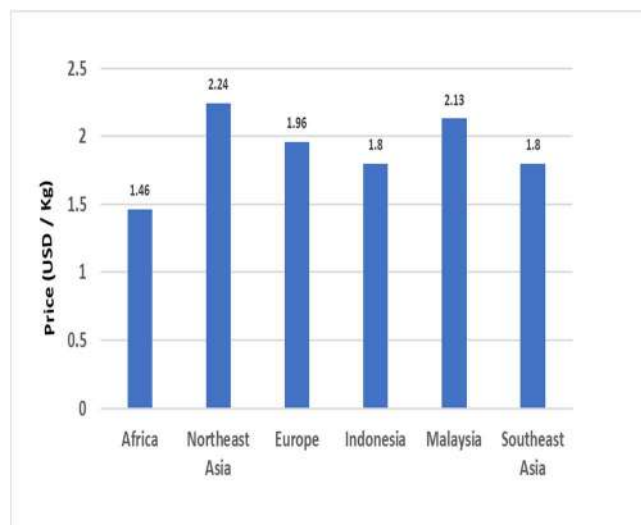


Figure 10: Natural Rubber Prices in December 2025

## DISCUSSION

From the results and reviews, it appears the outlook for rubber prices is expected to remain weak due to continued oversupply from major producing countries like Thailand, Indonesia, India, Malaysia, Vietnam, Sri Lanka, Singapore. This situation requires marketing strategies and incentives in African and Asian countries as earlier advised by Ahmed and Rustagi (1985). Therefore, in an attempt to bring prices to a more remunerative level, three major producing countries, Thailand, Indonesia and Malaysia, covering over 70% of world production, had agreed to set up an International Tripartite Rubber Organization (ITRO) to manage sales and withhold stocks. The joint action by the major producers, has suggested that natural rubber producers consider current prolonged low prices as no

more sustainable (Hiwa *et al.*, 2024).

Forecasts suggest potential moderate price growth driven by electric vehicle (EV) demand, but global trade challenges and supply issues could still cause price volatility. From the results, regional price differences for Natural Rubber 2025 were reported as follows:

- **Asia-Pacific:** Prices remain high due to industrial demand;
- **Europe:** Moderate prices with minor fluctuations based on import reliance;
- **Africa:** Lower prices due to smaller production volumes; and
- **North America:** Stable pricing influenced by import's dependency.

The production versus consumption (Major producers like Thailand, Indonesia and Vietnam) often see prices influenced by the output, while importers like U. S., Europe drive demand. The increased competition (Harahap and Bhima 2018) from low-priced rubber in Africa and other countries is likely to exert further downward pressure necessitating a strategic approach and further research (Ahmed and Rustagi 1985; Jaworski and Kohli 1990).

The Natural Rubber Price Index indicate that, as of December 2025, Northeast Asia leads with 2.24 USD/Kg, while Africa records 1.46 USD/Kg. Prices are expected to moderately rise due to strong demand, stable Southeast Asian supply, and limited alternative sources.

Several factors contributed to recent NR price movements including:

- Supply disruptions in key producing regions;
- Increased industrial demand in automotive and manufacturing sectors;
- Rising logistical and shipping costs;
- Fluctuating currency exchange rates in major rubber-exporting countries.

Aside currency influencing a long-term change in rubber prices, the fundamental factors influencing rubber prices are demand and supply, and hence stocks. Natural rubber prices have been on a declining trend since 1995 as a result of global stocks rising to a historical high and it is only in recent years that they have begun to taper off. Apart from currency factor, the increase in productivity in the three main producer countries has also added to the problem as NR production in Thailand, for example, has been increasing substantially through the implementation of accelerated rubber replanting with high yielding clones. Furthermore, these results align with findings that market intervention, e.g. in Thailand, has also lifted local rubber prices artificially higher, resulting in output that is greater than that dictated by demand.

Thailand currently operates an intervention scheme with the objective of supporting the price received by rubber smallholders. The report of Budiman (2025)

indicated that the price support scheme has apparently achieved its objective but at a very high cost, partly borne by the Government of Thailand and partly by the domestic processing industry.

In the era of price fluctuations and unpredictability, it is really crucial that farmers need appropriate and timely information to help them forecast prices of rubber to reduce this growing concern as rubber is a strategic agricultural commodity and a source of income (Hilwa *et al.*, 2024).

## CONCLUSION

The data, which were collected, and the analyses showed that the studied areas are actually among the rubber producing regions worldwide. During December 2025, Natural Rubber Prices showed diverse trends across regions:

- Africa: 1.46 USD/Kg
- Northeast Asia: 2.24 USD/Kg
- Europe: 1.96 USD/Kg
- Indonesia: 1.80 USD/Kg
- Malaysia: 2.13 USD/Kg
- Southeast Asia: 1.80 USD/Kg
- Thailand: 1.82 USD/Kg
- North America: 1.85 USD/Kg

These figures indicate strong regional differences, influenced by local production capacity, import/export regulations, and demand from the automotive and industrial sectors.

Price of rubber over the periods covered was dwindled felling to 175.30 USD Cents / Kg on December 19, 2025. Although rubber's price has risen 1.46%, but it is still 7.40% lower than in 2024, and this could discourage farmers from going into rubber farming. However, active collaboration of RRIN with rubber farmers would help disseminate useful market information to smallholder farmers to plan ahead and address challenges. This is extremely crucial to the farmers.

From the study, it was found that, clearly, the rubber market is influenced by various factors that can cause prices to fluctuate. Prices are influenced by supply-demand dynamics (like the Demand from automotive, industrial, and medical sectors in New York, London, Japan, China etc), regional production output (Production levels), transportation costs, industrial demand, seasonal harvests, Government regulations, import/export policies, and trade agreements. Budiman (2025) also reported that one of the factors influencing prices of rubber is weather.

By partnering with RRIN, rubber farmers and marketers can access valuable insights and analytics that will enable them to navigate the complexities of the rubber market with confidence. This was supported by Antoni and Tokuda (2019) who showed the need for identification of obstacles of rubber farmers prior to winning their interests.

With the availability of these data and information, farmers, marketers, and companies can have positive or negative overview and would not only adapt to changing market conditions but also identify opportunities for growth and innovation.

While no significant rubber production in Europe due to unsuitable climate for rubber trees, the region is a major consumer and importer of rubber. Key European countries like Germany, France, Italy, and Spain are consumers and importers of natural rubber. Asia is the largest hub for natural rubber production in the World accounting for 90 percent of the total global production. The top three producer countries are Thailand, Indonesia, and Malaysia, which together account for about 70 percent of the total natural rubber production globally. However, moderate regional differences, which were driven by production capacity, have been reported. The results indicated: 1) peak prices in Northeast Asia due to high demand; 2) Stable output in Indonesia and Malaysia, ensuring price support; 3) Moderate volatility in North America and Europe influenced by industrial activity and import reliance.

## RECOMMENDATIONS

- 1) The Authors recommend an understanding of the price of natural rubber, since price variation is essential for supply chain planning and cost optimization, and long-term trends is essential for strategic planning in industries relying on rubber-based products.
- 2) Making information on prices of natural rubber available to rubber farmers to enable stakeholders to identify patterns and anticipate future price shifts.
- 3) Monitoring the Natural Rubber price history alongside current indices is indispensable as it provides valuable insights for traders, manufacturers, and investors.
- 4) The information contained in this article, which weakened the farmers and marketers, should be disseminated to rubber farmers through extension services of RRIN and agricultural development programmes especially in the South-South zones of Nigeria where RRIN operates often for strategic planning.
- 5) The authors recommend that government provides market information and prices of rubber to farmers on a yearly basis.
- 6) Provision of meteorological data to rubber farmers in the wake of climate change, together with strong leadership in rubber industries, is also recommended to enable rubber farmers practice climate smart agriculture (CSA).

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