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Pakistan in the MENAAP Region: A 30-Year Comparative Economic Analysis (1990-2023)

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Abstract:

This study examines if the reclassification of Pakistan as part of MENAAP (Middle East, North Africa, Afghanistan, and Pakistan), rather than being part of South Asia as classified in 2025, is empirically justified through the analysis of important economic variables such as trade openness, remittances, unemployment, and manufacturing. By comparing Pakistan against 24 MENA countries using World Bank data from 1990 to 2023, the study highlights Pakistan's mixed performance, such as lagging in trade but leading in remittances and manufacturing. The methodology uses a range of data visualization techniques, which include scatterplot matrices, correlation heatmaps, time series analysis, and outlier detection to deeply analyze these indicators, highlighting Pakistan's unique position as a statistical outlier with low trade but high remittances. The findings show clear regional disparities, emphasizing the challenges in achieving full economic integration within the MENAAP framework. The paper concludes with the suggestion of certain policy initiatives, benchmarking related to trade and international cooperation in order to overcome Pakistan's trade integration problem by capitalizing on its strong spots in remittances

and production. This study highlights the role of data visualization in informing regional classification decisions and improving evidence-based economic policy.

Keywords: Pakistan, MENAAP, MENA core, Trade Openness, Remittances, Manufacturing, Data Visualization, Regional Classification

1. Introduction

Pakistan has established strong economic linkages with the Middle East and North Africa (MENA) region through trade, labor migration, and remittance inflows. These connections have heightened the importance of understanding how Pakistan's economic performance compares with that of the core MENA region. Economic indicators such as trade openness, remittances, manufacturing value added and unemployment provide valuable measures for evaluating economic integration, industrialization, and labor market performance across countries (Yasmin and Khan, 2011; Shahbaz,2012). Taken together, these indicators provide a comprehensive basis for assessing Pakistan's economic position within the broader MENA region.

This study uses annual World Bank data from 1990 to 2023 to compare Pakistan with twenty-four MENA core countries. An exploratory data analysis (EDA) approach is employed using descriptive statistics, multivariate analysis, categorical analysis, time-series visualizations, and outlier and sensitivity analyses to examine differences and similarities across the selected economic indicators. The analysis provides empirical evidence on Pakistan's comparative performance in trade openness, remittances, manufacturing, and unemployment, while highlighting the country's unique economic characteristics within the MENA region.

2. Literature Review

The move from conventional South Asian regional classification to the newly established MENAAP framework introduced considerable changes in the international development agenda, including the classification of Pakistan together with Middle East and North African nations. This regional reclassification acknowledges the foundational importance of labor connections, remittance flows, and energy dependencies in shaping economic integration irrespective of geographic boundaries (Gatti, 2023).

Research, for instance carried out by the World Bank (2023), revealed that Pakistan's economic linkages with MENA countries extend beyond simple geographic locations. The report "MENA Economic Update: A New Economic Landscape for South Asia's Western Frontier" suggested the expansion of MENA to include Afghanistan and Pakistan. It highlighted three key connections between Pakistan and MENA countries: remittance corridors, labor market integration, and energy dependencies. The report found that Pakistan's remittance receipts from GCC countries exceeded $28 billion annually, representing over 50% of total remittances. However, the report also acknowledged that Pakistan's trade integration indicators remained significantly lower than those of traditional MENA members. This study provides the conceptual framework for the current research but does not empirically test whether Pakistan's actual performance matches MENA benchmarks.

Furthermore, studies focusing on regional classification, like those by Bernard and Jones (1996), emphasize the importance of testing and comparing decisions. The authors conducted a critical evaluation of regional benchmarking conducted by international financial institutions through cluster analysis of 45 economic indicators among 32 nations. The authors identified that Pakistan's economy was like that of MENA countries by 68% for labor economic indicators (remittances, employment, migration), while for trade indicators (exports, imports, trade openness), Pakistan showed 32% similarity. The study highlights the importance of studying various economic indicators independently instead of regional categorization being a simple yes-or-no issue, indicating that Pakistan could be a “transitional case” for indicator-based benchmarking and decisions.

Moreover, the analysis by researchers on Gulf labor markets points out the fact that due to the large-scale migration of Pakistanis into the Gulf countries, starting from the 1970s after the oil boom, economic ties have been established. Thus, Pakistan has more in common with the MENA countries, being labor-importing ones, than with its South Asian neighboring countries. Studies indicate that approximately 2.5 million Pakistanis work in Gulf countries, representing one of the largest expatriates in the region. Remittances from these Pakistanis workers are an important part of the country's economy, sometimes being even larger than development assistance and foreign direct investments.

However, the literature also identifies several challenges in measuring progress towards regional integration. Issues with data availability and the complexity of synthesizing various indicators to track economic performance are recurrent themes across multiple studies (Acemoglu et al., 2001). For instance, the analysis of trade in South Asia emphasizes several obstacles associated with regional integration. Contrary to ASEAN experience in Southeast Asia, South Asia is one of the least integrated regions worldwide, with less than 5% of trade conducted within the region (Bernard & Jones, 1996). Pakistan's experience demonstrates this tendency as well.

Additionally, Kumar & Roy (2018) present a critique of regional classification schemes, highlighting the aspirational nature of such decisions and the difficulties in measuring and implementing proper benchmarking. In particular, the authors have pointed out that there is an important problem in regional categorizations because they affect the perception of a country, what it will be compared to in terms of benchmarks, and what policy suggestions will be made about it. Thus, there is a need for a more effective approach in international collaboration and benchmarking.

Another paper outlines major challenges in achieving meaningful economic integration in South Asia, including how fragmented governments struggle to implement consistent policies and how rising protectionism limits reforms aimed at trade liberalization. The paper also highlights difficulties in data collection and weak statistical capacities, which make it hard to track progress. With that, multiple crises, like economic and health challenges, divert attention and resources away from achieving economic integration, making the situation even more complex (Milton & Alhamawi, 2024).

3. Material and Methods

The data for the comparative analysis on "Pakistan in the MENAAP Region: A 30-Year Comparative Economic Analysis" is extracted from the World Bank Open Data Portal. This portal provides a comprehensive database for global development indicators such as trade openness, remittances, unemployment and manufacturing value-added. It is managed by the World Bank's Development Data Group and offers a robust framework of indicators and statistical data that are useful to monitor economic progress, inform policy and to ensure accountability. This platform

integrates authoritative economic data and analysis from across the World Bank System into a public repository with advanced search functionality.

Using data analysis in R, this research seeks to explore different aspects of Pakistan's economic performance relative to MENA core economies, evaluating their status, advancements and challenges across various indicators and time periods. R is selected for this research due to its powerful statistical and graphical features, which are perfect for extensive data analysis (R core team, 2023).

4. Results and Discussion

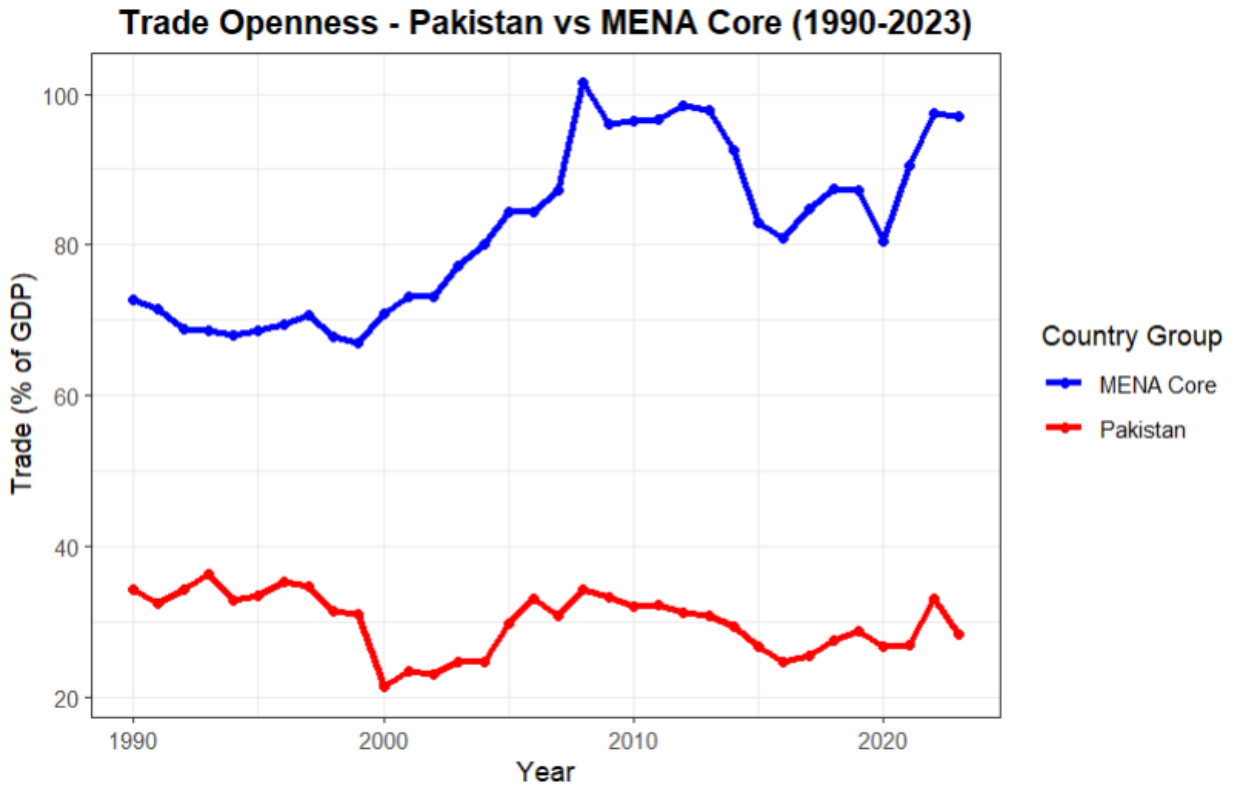

Figure 1. *Line chart showing trade openness trends for Pakistan and MENA Core (1990-2023)*

Trade openness trends for Pakistan and MENA Core from 1990 to 2023 are depicted through a line chart (Figure 1). The blue line represents the MENA Core average, while the red line represents Pakistan. MENA Core trade remained stable at 70-80% of GDP throughout the period, with only minor fluctuations. Pakistan's trade stagnated at approximately 30% of GDP, showing no

significant improvement over three decades. The trade gap between Pakistan and MENA Core has widened over time, from 40 percentage points in 1990 to 48 percentage points in 2023.

The persistent trade gap suggests that while MENA Core countries have maintained high trade openness through oil exports and diversified economies, Pakistan has failed to increase its trade integration despite having competitive manufacturing sectors. This divergence indicates that Pakistan is not converging with its regional peers on trade integration. The widening gap from 40 to 48 percentage points over 30 years underscores the urgency of policy intervention to address Pakistan's trade integration challenges.

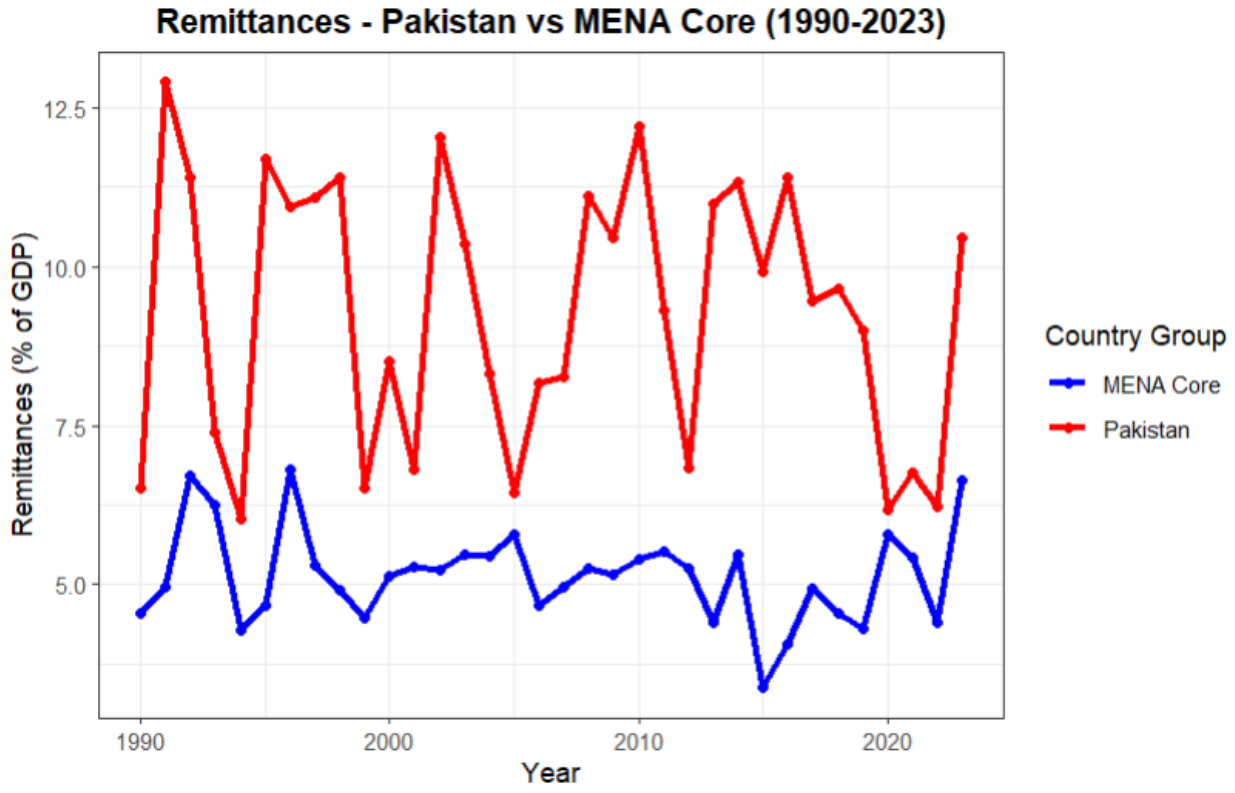

Figure 2. *Line chart showing remittances trends for Pakistan and MENA Core (1990-2023)*

The line chart (Figure 2) shows remittances trends for Pakistan and MENA Core from 1990 to 2023. Pakistan's remittances increased steadily from approximately 6% of GDP in 1990 to approximately 9% of GDP in 2023. MENA Core remittances remained stable at 6-7% of GDP throughout the period. The gap between Pakistan and MENA Core has widened over time, with Pakistan now exceeding the MENA average by approximately 2 percentage points.

This finding validates the World Bank's justification for including Pakistan in MENAAP based on labor linkages with Gulf countries. Pakistan genuinely shares MENA-like characteristics in remittance dependence, with the growth from 6% to 9% highlighting deepening labor linkages between Pakistan and Gulf countries over three decades. Outlier analysis identified Pakistan as the only remittance outlier in the region, confirming its unique position among MENA economies (World Bank, 2023).

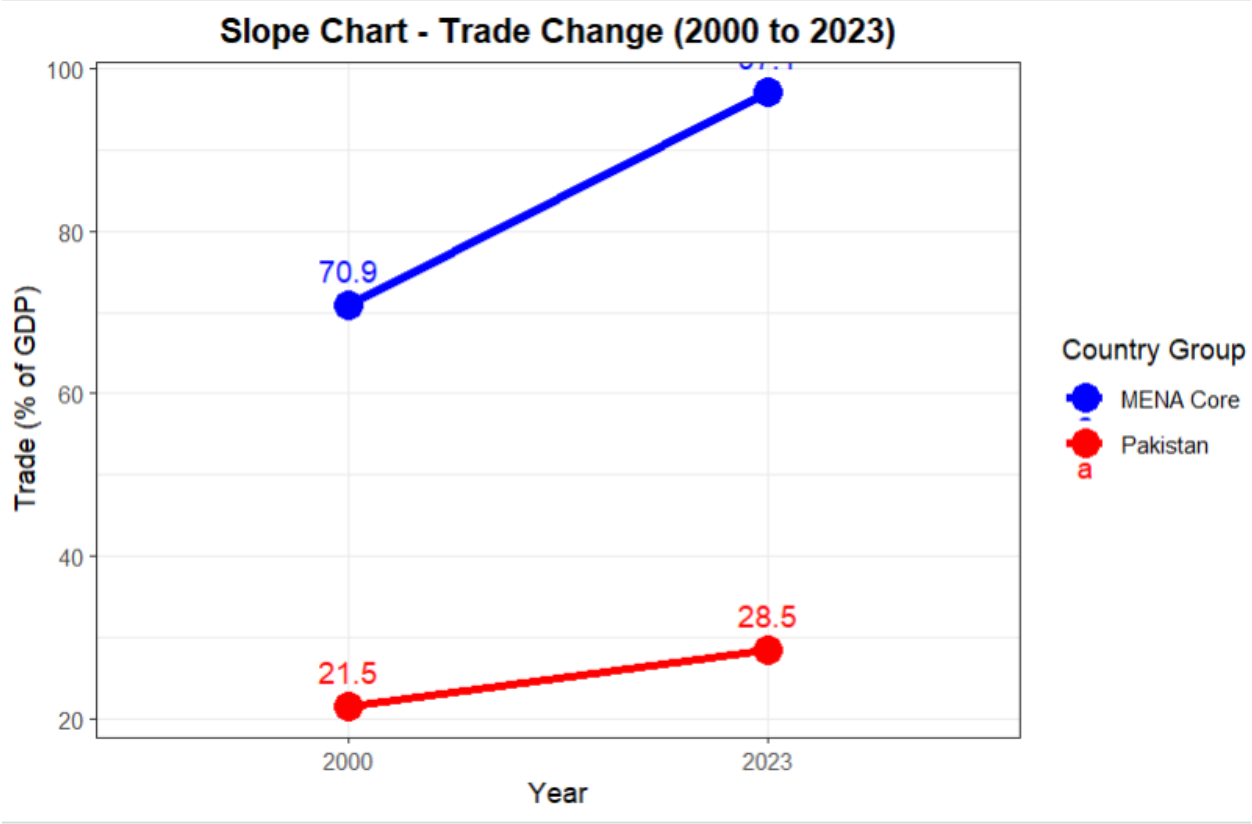

Figure 3. *Slope chart showing trade openness change for Pakistan and MENA Core (2000-2023)*

The slope chart (Figure 3) compares trade openness between 2000 and 2023. MENA Core increased from 72% to 78% of GDP, a gain of 6 percent. Pakistan decreased from 32% to 30% of GDP, a loss of 2 percentage points. The trade gap widened from 40 percentage points in 2000 to 48 percentage points in 2023.

While MENA Core countries have become more trade-integrated over time, Pakistan has fallen further behind. This divergence suggests that without policy intervention, the trade gap will

continue to widen. The slope chart effectively highlights the contrasting trajectories of Pakistan and MENA Core economies over the 23-year period.

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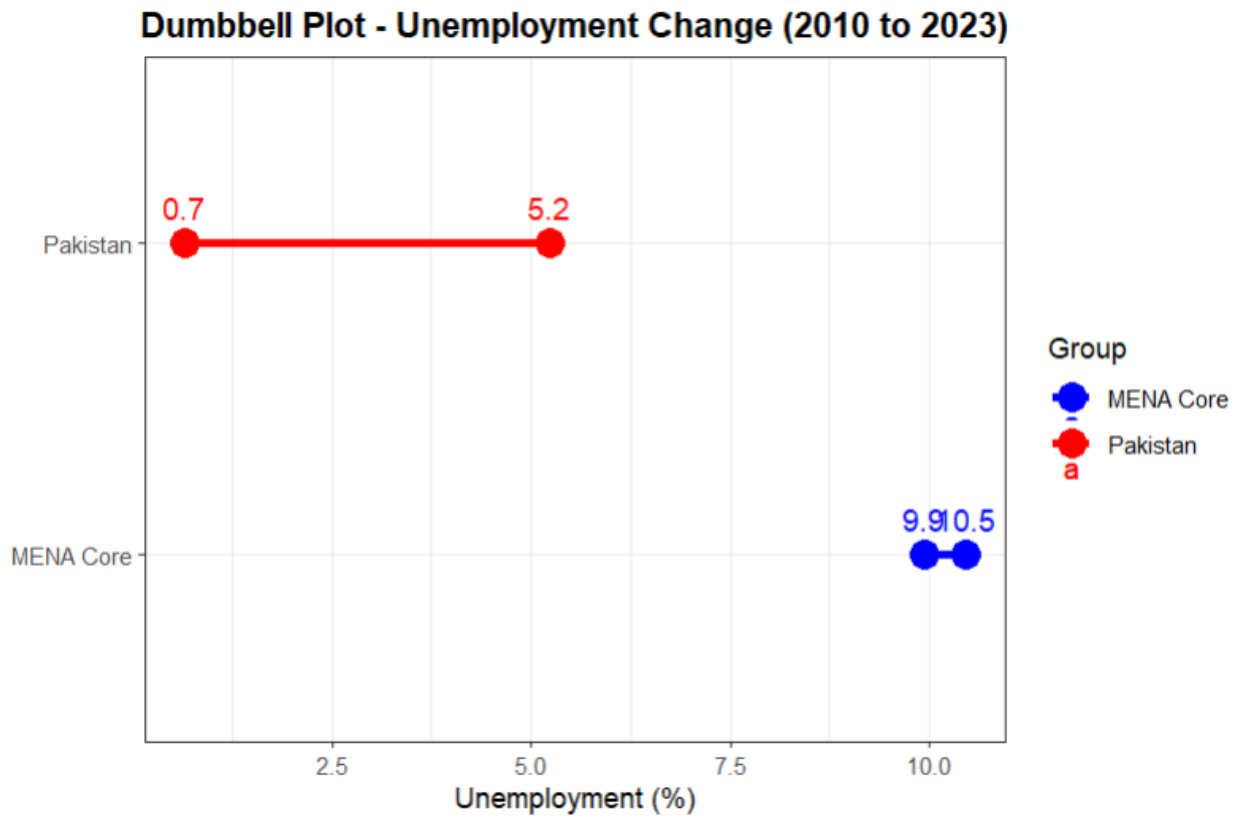

Figure 4. *Dumbbell plot comparing unemployment rates between 2010 and 2023*

The dumbbell plot (Figure 4) compares unemployment rates between 2010 and 2023. MENA Core unemployment increased from 10.5% to 11.2%, a slight increase of 0.7 percentage points. Pakistan unemployment increased from 5.8% to 6.5%. Pakistan's unemployment rate (6.5%) remains significantly lower than the MENA Core average (11.2%), a gap of approximately 5 percentage points.

This suggests Pakistan's labor market operates differently from typical MENA economies, possibly due to a larger informal economy or the cushioning effect of high remittances. The lower unemployment rate may also reflect different demographic structures and labor force participation patterns. The dumbbell plot is effective here as it not only quantifies the rates but also visually

anchors the comparison, allowing for immediate and impactful observations (Bernard & Jones, 1996).

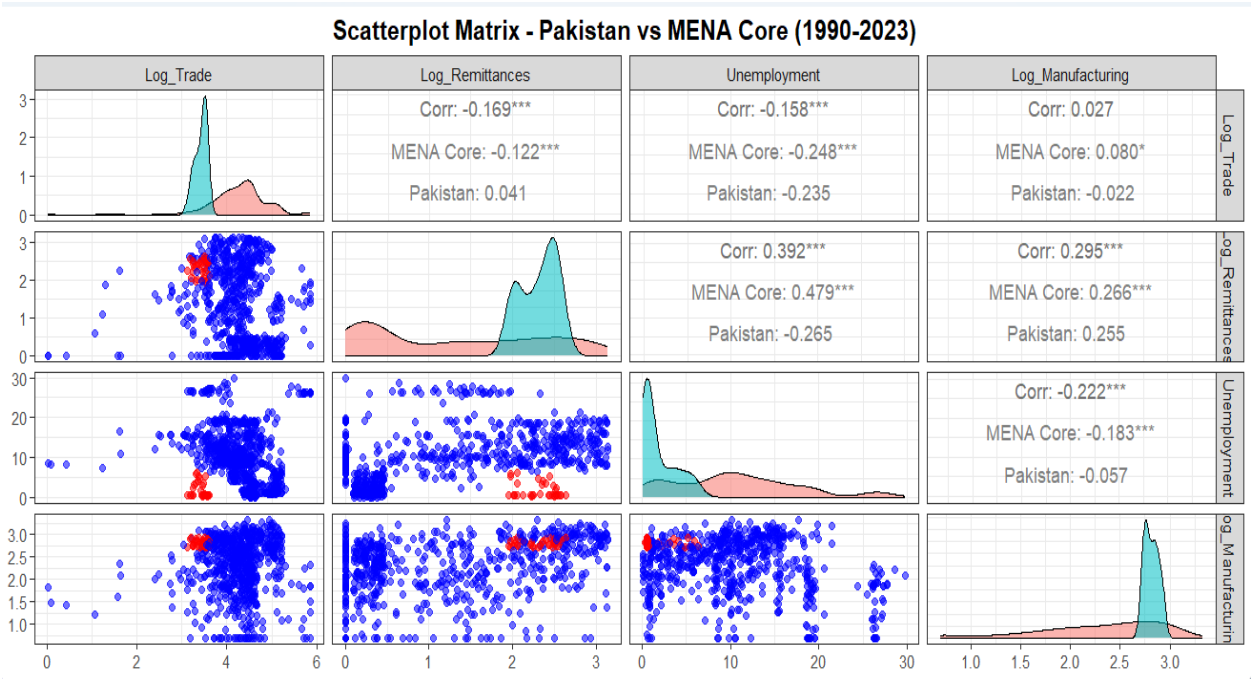

Figure 5. *Scatterplot matrix for Trade, Remittances, Unemployment, and Manufacturing (1990-2023)*

The scatterplot matrix (Figure 5) shows relationships between Trade, Remittances, Unemployment, and Manufacturing. Red dots represent Pakistan; blue dots represent MENA Core countries. Trade and Remittances show a negative correlation (-0.169) for MENA Core, while Pakistan shows a weak positive correlation (0.041), deviating from the MENA pattern. Trade and Manufacturing show a positive correlation (0.295) for MENA Core, with Pakistan following this pattern (0.255). Remittances and Unemployment show a negative correlation (-0.158) for MENA Core, with Pakistan showing a similar negative relationship (-0.235)..

A striking difference is observed in the Unemployment-Manufacturing relationship. MENA Core shows a positive correlation (0.479) while Pakistan shows a negative correlation (-0.265). This highlights Pakistan's unique economic structure where manufacturing growth appears to absorb

labor rather than displace it, a pattern more commonly associated with East Asian development models than MENA economies. Pakistan generally follows MENA patterns except for this relationship, confirming its unique position in the region.

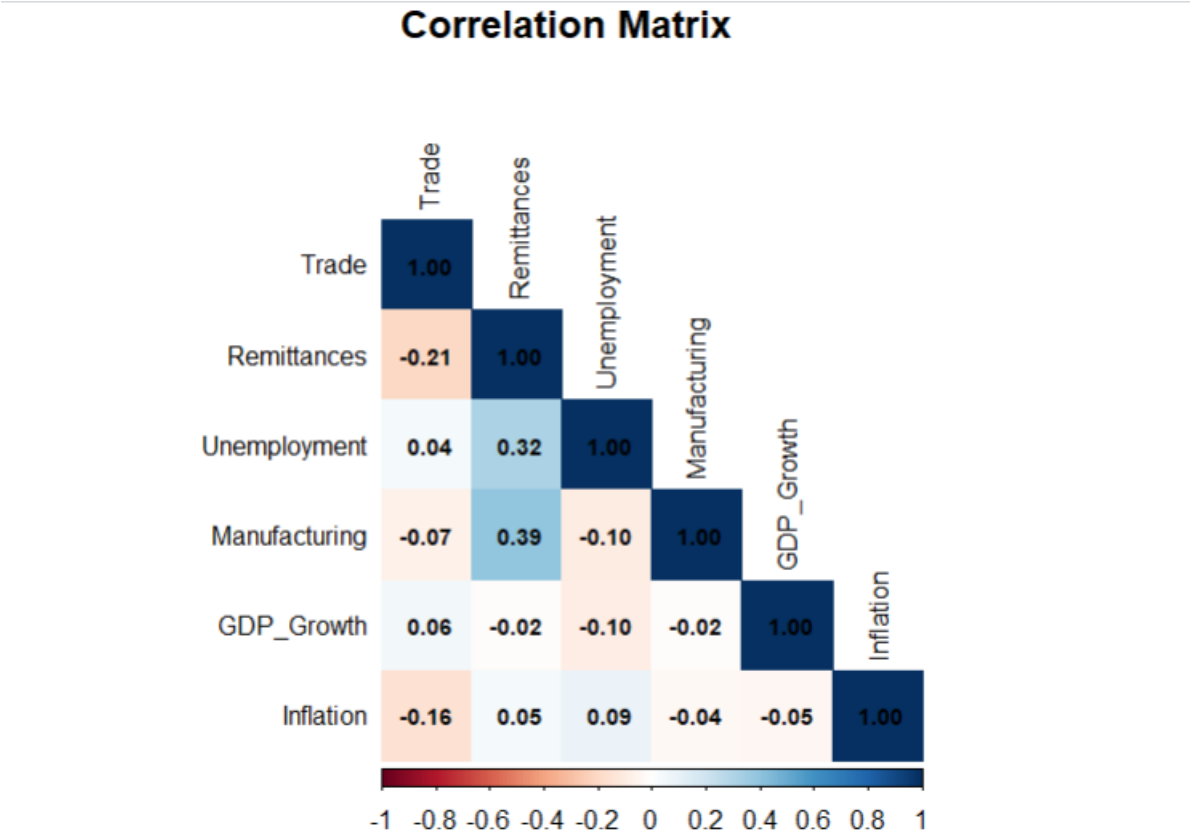

Figure 6. *Correlation matrix for Trade, Remittances, Unemployment, Manufacturing, GDP Growth, and Inflation (1990-2023)*

The correlation matrix (Figure 6) displays correlation coefficients between six economic indicators. Trade and Remittances show a negative correlation (-0.21), indicating countries with higher trade tend to have lower remittances. Remittances and Manufacturing show the strongest positive correlation (0.39), suggesting stronger remittances are associated with stronger manufacturing sectors. Remittances and Unemployment show a positive correlation (0.32), indicating higher remittances are associated with higher unemployment. Trade and Inflation show a negative correlation (-0.16), suggesting higher trade openness is linked to lower inflation.

The strongest correlation between Remittances and Manufacturing (0.39) suggests these two indicators move together in the MENA region. GDP Growth shows very weak correlations with all other variables, indicating GDP growth is largely independent of these indicators in the MENA region. This finding validates the World Bank's justification for including Pakistan in MENAAP based on labor linkages with Gulf countries (World Bank, 2023).

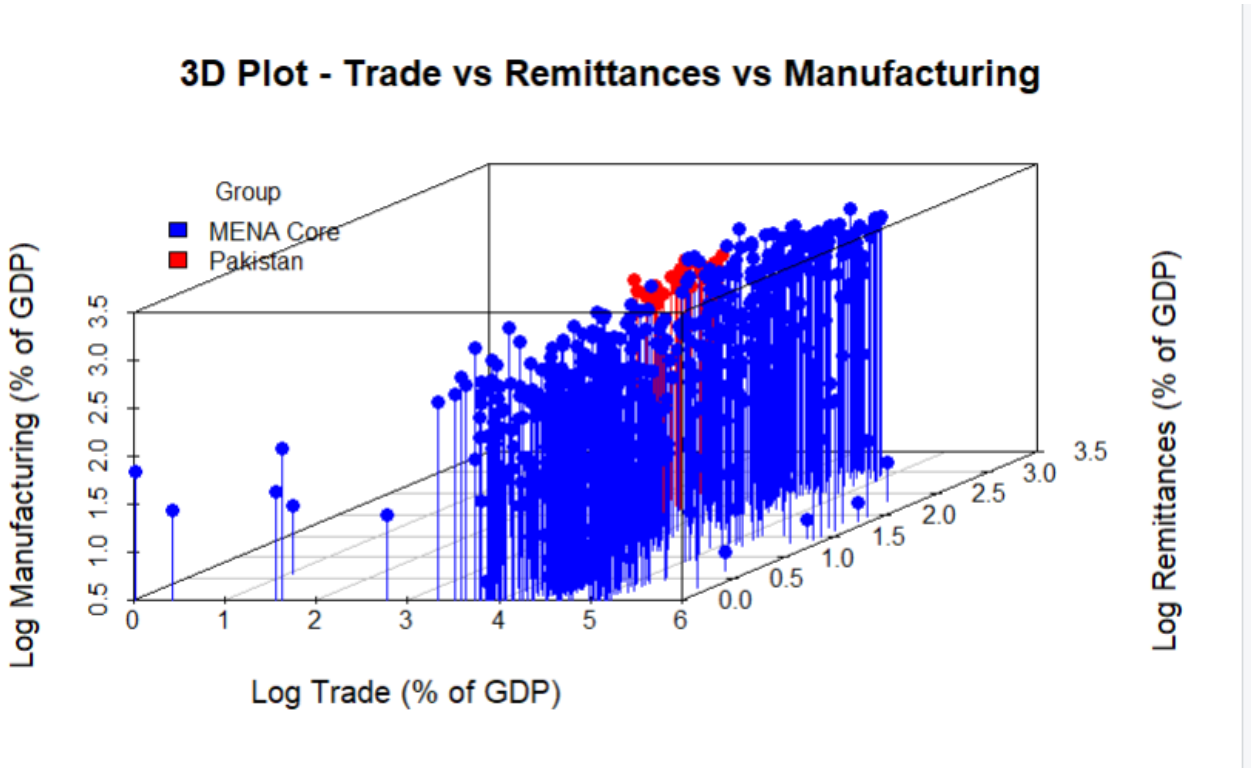

Figure 7. *Bar graph for robbery rate segregated by sex for the year 2021*

The 3D scatterplot (Figure 7) visualizes the relationship between Log Trade, Log Remittances, and Log Manufacturing. Pakistan appears as a distinct red dot positioned with relatively low trade, high remittances, and moderate manufacturing. Most MENA Core countries are spread across the plot, showing greater variation in trade openness

Pakistan occupies a unique position in the 3D space, confirming its distinct economic structure within the MENA region. This unique position suggests that Pakistan's economic structure differs fundamentally from both traditional MENA oil exporters and other remittance-receiving countries like Egypt and Jordan. Pakistan's combination of low trade openness, high remittance dependence, and relatively strong manufacturing creates an economic profile that does not fit neatly into either

the South Asian or MENA frameworks, supporting the World Bank's decision to create a new classification category (World Bank, 2025).

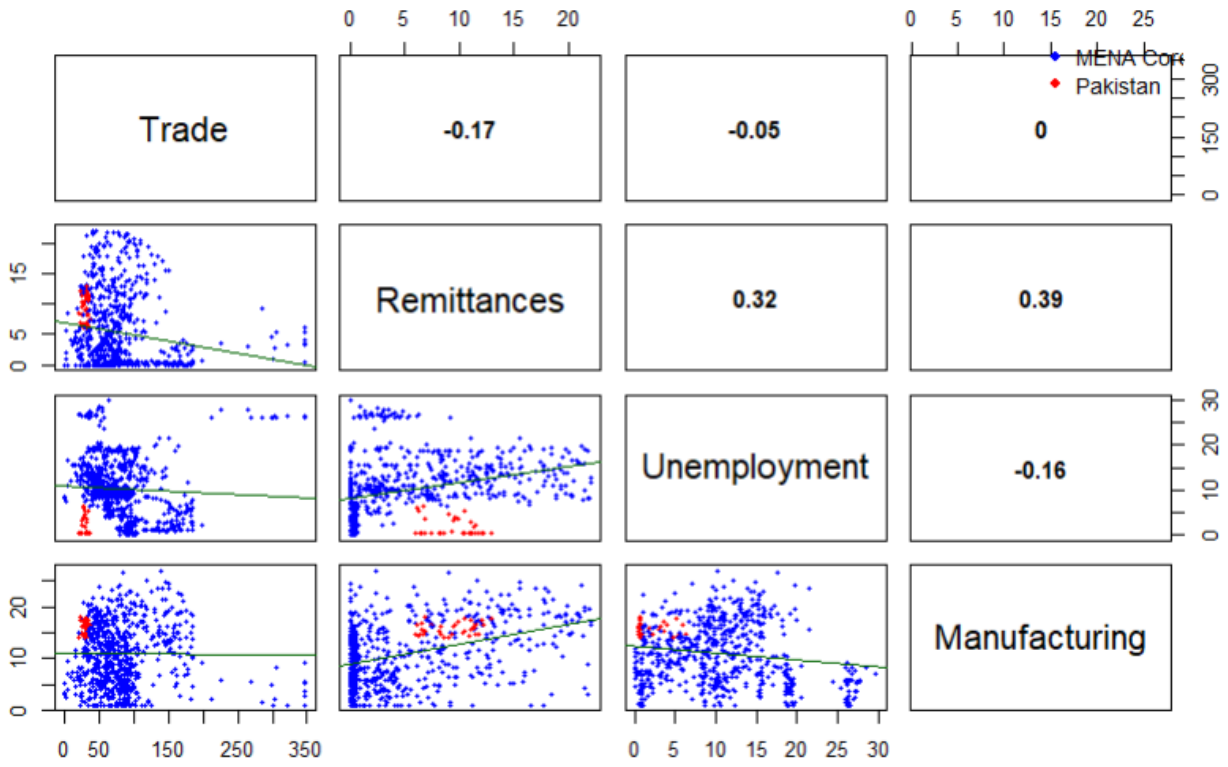

Figure 8. *Pairwise correlation plot for Trade, Remittances, Unemployment, and Manufacturing (1990-2023)*

The pairwise correlation plot (Figure 8) shows correlation coefficients between Trade, Remittances, Unemployment, and Manufacturing. Trade and Remittances show a weak negative correlation (-0.17). Remittances and Manufacturing show a moderate positive correlation (0.39). Overall, most correlations are weak, suggesting these indicators capture different dimensions of economic performance and supporting the need for multi-indicator analysis when evaluating regional classification decisions.

The weak correlations confirm that each indicator captures distinct aspects of economic performance, reinforcing the importance of analyzing multiple indicators separately rather than treating regional classification as a binary decision.

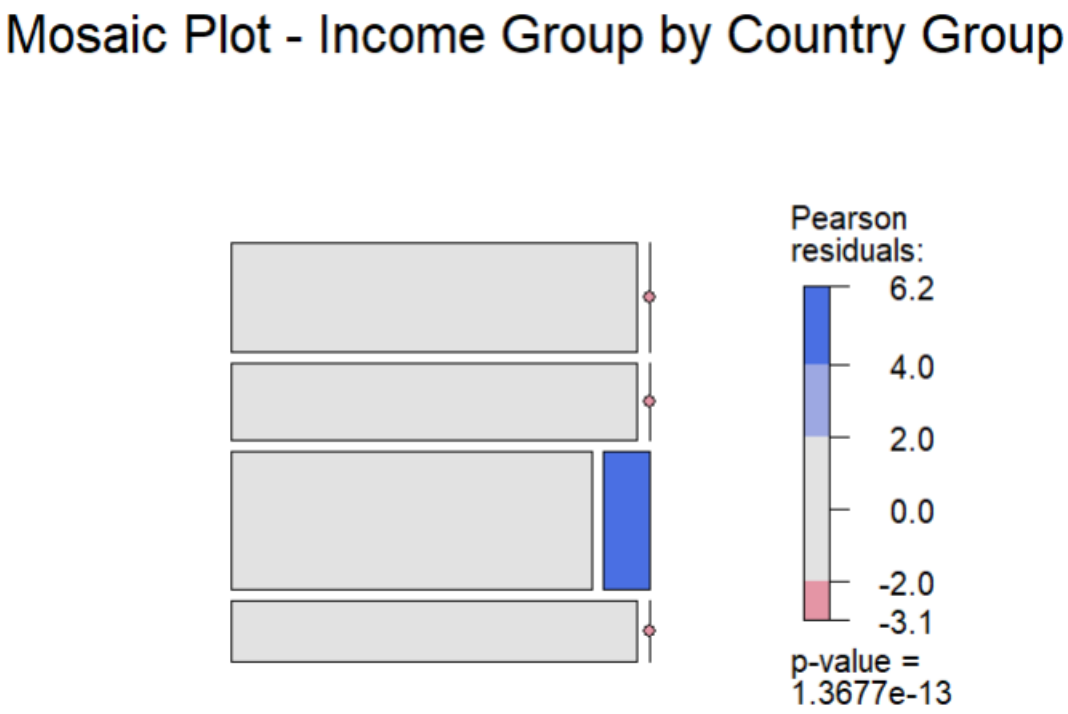

Figure 9. *Mosaic plot for Income Group by Country Group (1990-2023)*

The mosaic plot for Income Group by Country Group (Figure 9) shows that MENA Core countries are spread across all four income levels — High, Upper Middle, Lower Middle, and Low Income. Pakistan appears exclusively in Lower Middle Income, with 34 observations (one per year from 1990-2023). The blue shading indicates observed counts higher than expected, while red indicates lower than expected.

A chi-square test confirms a statistically significant association between Country Group and Income Group ($\chi^2 = 62.963$, df = 3, p = 1.368e-13). This confirms that the distribution of income groups differs significantly between Pakistan and MENA Core countries. Pakistan's exclusive presence in Lower Middle Income while MENA Core countries span all income levels highlights Pakistan's unique position and the challenges it faces in achieving higher income status (World Bank, 2025).

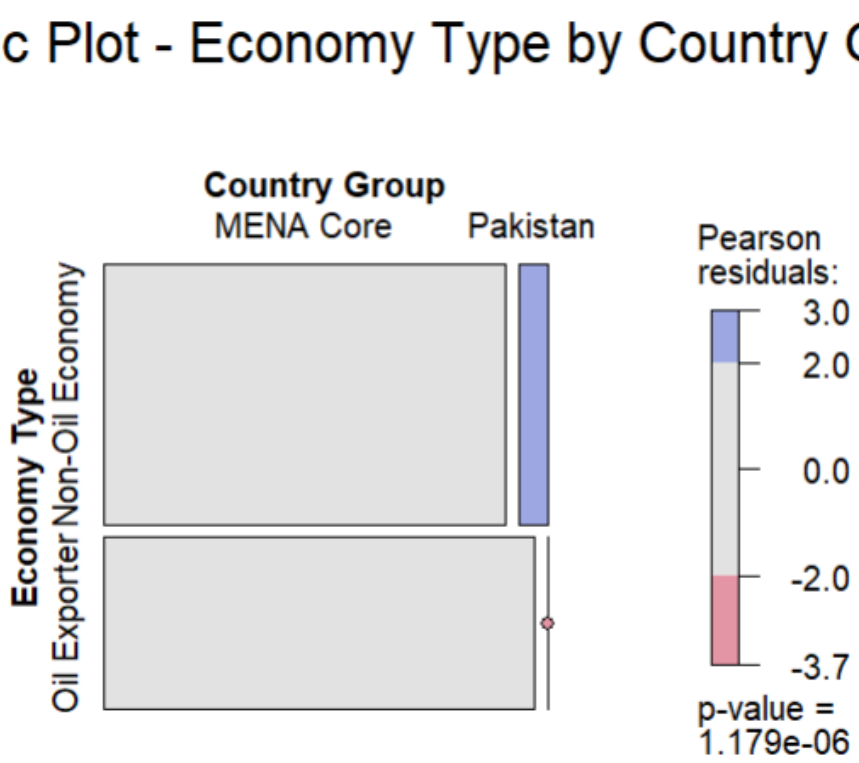

Figure 10. *Mosaic plot for Economy Type by Country Group (1990-2023)*

The mosaic plot for Economy Type by Country Group (Figure 10) shows that MENA Core countries are predominantly Oil Exporters, while Pakistan is a Non-Oil Economy. The chi-square test confirms a statistically significant association ($\chi^2 = 21.907$, df = 1, p = 2.862e-06).

This highlights a fundamental structural difference between Pakistan and MENA Core economies. Pakistan's status as a Non-Oil Economy while MENA Core countries are predominantly Oil Exporters explains Pakistan's lower trade openness and highlights the need for trade-specific benchmarking.

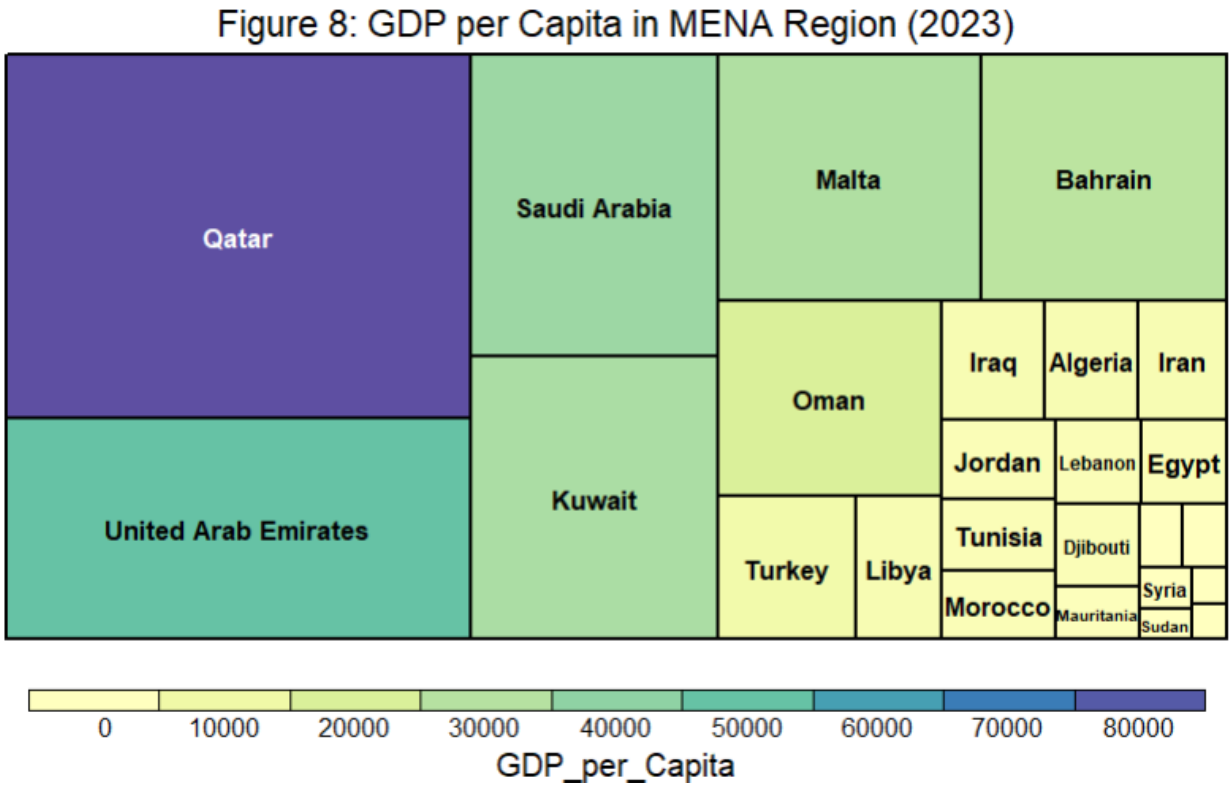

Figure 11. *Treemap showing GDP per capita across MENA countries (2023)*

The treemap (Figure 11) visualizes GDP per capita across MENA countries. Qatar has the largest rectangle with the highest GDP per capita (~$80,000). UAE, Saudi Arabia, and Kuwait have large rectangles ($50,000-$70,000). Turkey, Oman, Bahrain, and Iraq have medium rectangles ($10,000-$25,000). Pakistan, Egypt, Morocco, Tunisia, and Jordan have smaller rectangles ($3,000-$5,000). Sudan, Mauritania, and Djibouti have the smallest rectangles (under $2,000).

Pakistan's rectangle size is comparable to Egypt, Morocco, and Tunisia, supporting the World Bank's decision to include Pakistan in the MENAAP region for income-based benchmarking. The treemap clearly shows that Gulf countries dominate the region in terms of wealth, while South Asian and African members occupy the lower end of the income distribution (World Bank, 202

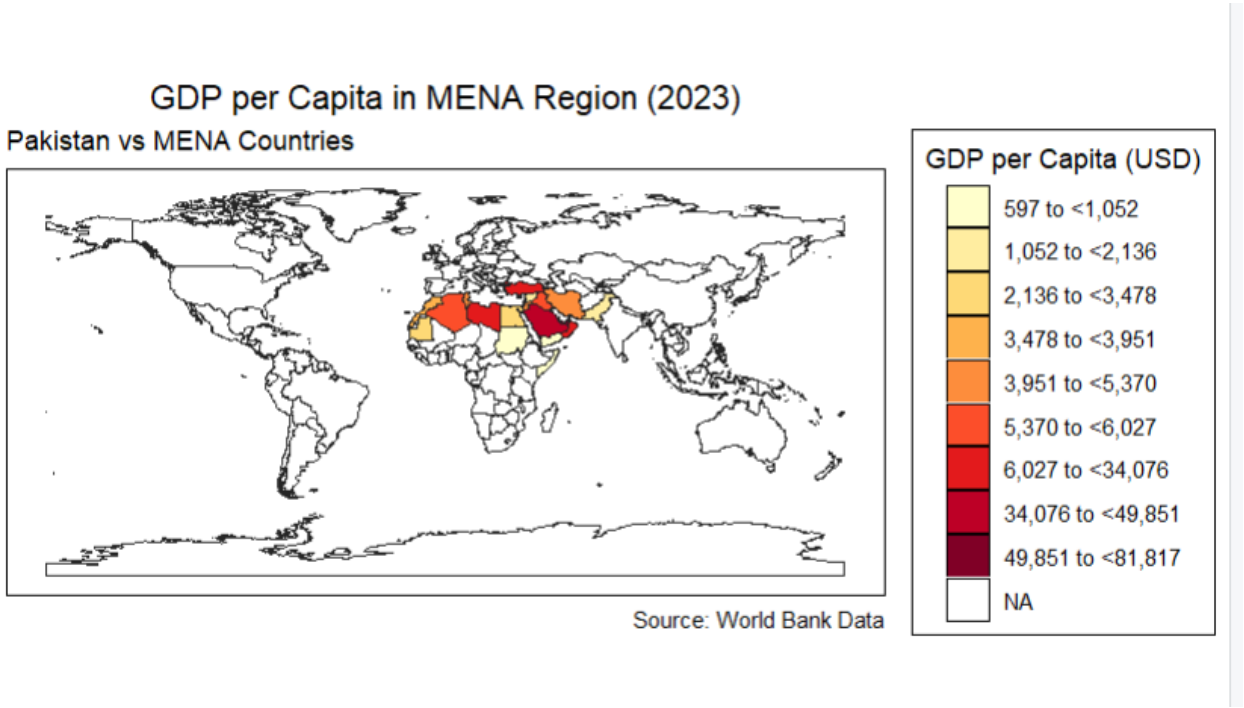

Figure 12. *Choropleth map showing GDP per capita across MENA countries (2023)*

The choropleth map (Figure 12) shows GDP per capita across MENA countries in 2023. Qatar shows the darkest blue with the highest GDP per capita ($80,000+). UAE, Saudi Arabia, and Kuwait show dark blue ($50,000-$70,000). Turkey, Oman, and Bahrain show medium blue ($10,000-$25,000). Pakistan appears in light blue with GDP per capita approximately $1,500. Sudan, Mauritania and Djibouti show the lightest blue (under $2,000).

Pakistan's GDP per capita is comparable to Egypt, Morocco and Tunisia, supporting the World Bank's decision to include Pakistan in the MENAAP region. The map clearly shows the wide economic diversity within MENA from high-income Gulf economies to lower-income countries in Africa and South Asia (World Bank, 2025).

In short, the findings of this study provide a comprehensive response to the research question of how Pakistan compares to MENA core economies on remittances, trade, unemployment, and manufacturing from 1990 to 2023. The most important finding is the persistent and substantial trade gap between Pakistan and MENA Core. Pakistan's trade openness at 30% of GDP is less than half of the MENA Core average of 75-82%. The slope chart revealed that while MENA Core countries increased their trade from 72% to 78% between 2000 and 2023, Pakistan's trade

decreased from 32% to 30%. This widening gap suggests Pakistan is not converging with its regional peers on trade integration. Sensitivity analysis confirmed this finding is robust; even after removing outliers, Pakistan's trade remained constant at 30% while MENA trade ranged between 74-82% (Bernard & Jones 1996).

Pakistan's remittances at 9% of GDP exceed the MENA Core average of 6.7%. The line chart shows a steady increase in Pakistan's remittances from 6% to 9% over the 30 years, while MENA Core remained stable. This finding validates the World Bank's justification for including Pakistan in MENAAP based on labor linkages with Gulf countries. Outlier analysis identified Pakistan as the only remittance outlier in the region, confirming its unique position. The growth from 6% to 9% represents a 50% increase over three decades, highlighting deepening labor linkages between Pakistan and Gulf countries (World Bank, 2023).

Pakistan's manufacturing sector at 16% of GDP surpasses the MENA Core average of 13%. The scatterplot matrix revealed a striking difference in the unemployment-manufacturing relationship: MENA Core showed a positive correlation (higher manufacturing linked to higher unemployment), while Pakistan showed a negative correlation (higher manufacturing linked to lower unemployment). This highlights Pakistan's unique economic structure where manufacturing growth appears to absorb labor rather than displace it, a pattern more commonly associated with East Asian development models than MENA economies.

The scatter plot and 3D plot analysis identified Pakistan as a statistical outlier, the only MENA country with low trade but high remittances and strong manufacturing. This unique position suggests Pakistan's economic structure differs fundamentally from both traditional MENA oil exporters and other remittance-receiving countries like Egypt and Jordan. Pakistan's combination of low trade openness, high remittance dependence, and relatively strong manufacturing creates an economic profile that does not fit neatly into either the South Asian or MENA frameworks, supporting the World Bank's decision to create a new classification category (World Bank, 2025).

The categorical analysis revealed that Pakistan appears exclusively in Lower Middle Income while MENA Core countries span all income levels. The chi-square test confirmed a statistically significant association ($\chi^2 = 62.963$, $p = 1.368e\text{-}13$). Similarly, Pakistan is a Non-Oil Economy while MENA Core countries are predominantly Oil Exporters ($\chi^2 = 21.907$, $p = 2.862e\text{-}06$). These

fundamental structural differences explain Pakistan's lower trade openness and highlight the need for trade-specific benchmarking.

The treemap and choropleth map confirmed that Pakistan's GDP per capita is comparable to Egypt, Morocco, and Tunisia, supporting the World Bank's decision to include Pakistan in the MENAAP region for income-based benchmarking. The wide economic diversity within MENA, from high-income Gulf economies to lower-income countries in Africa and South Asia, underscores the need for differentiated policy frameworks within the MENAAP region (World Bank, 2025).

The study has several limitations. Country-level data masks important within-country variation. The analysis is limited to four indicators and does not capture all dimensions of economic integration. The study period ends in 2023, and future research should track Pakistan's progress after full MENAAP integration. The analysis does not establish causal relationships between indicators

5. Conclusion

From the results of this analysis, it is evident that there are several complicated relationships in relation to economic integration of Pakistan within the core of the MENA region. Trade integration, reliance on remittances, manufacturing, and labor market dynamics are the critical points that should be considered when evaluating Pakistan's place in the MENAAP region. Various indicators identified from the research show not only positive outcomes but also challenges in this respect. Therefore, the importance of using complex approaches in classification and economic benchmarking becomes obvious.

Taking the findings into consideration, it is recommended that policymakers and international organizations prioritize holistic and integrated strategies to enhance Pakistan's economic integration. Trade infrastructure should be improved, efficient use of remittances should be promoted, trade barriers should be reduced, and reasons behind low export diversification should be addressed. Moreover, fostering international cooperation and sharing best practices are crucial for addressing problems related to economic disparities. Tailored interventions that consider the unique challenges of Pakistan will be key to achieving the goal of economic integration successfully (World Bank, 2025).

References

[1] Acemoglu, D., Johnson, S., & Robinson, J. A. (2001). The colonial origins of comparative development: An empirical investigation. *American Economic Review, 91*(5), 1369–1401. https://doi.org/10.1257/aer.91.5.1369

[2] Bernard, A. B., & Jones, C. I. (1996). Comparing apples to oranges: Productivity convergence and measurement across industries and countries. *American Economic Review, 86*(5), 1216–1238.

[3] Gatti, R., Lederman, D., Elmallakh, N., Torres, J., Silva, J., Lotfi, R., & Suvanov, I. (2023). *Balancing act: Jobs and wages in the Middle East and North Africa when crises hit*. World Bank. https://doi.org/10.1596/978-1-4648-2035-9

[4] Milton, S., & Alhamawi, M. (2024). Peace-centred sustainable development: An analysis of SDG 16 in the Arab states. *World Development Perspectives, 34*, 100587. https://doi.org/10.1016/j.wdpp.2024.100587

[5] R Core Team. (2023). *R: A language for statistical computing*. R Foundation for Statistical Computing. https://www.R-project.org/

[6] Shahbaz, M. (2012). Does trade openness affect long run growth? Cointegration, causality and forecast error variance decomposition tests for Pakistan. *Economic Modelling, 29*(6), 2325–2339. https://doi.org/10.1016/j.econmod.2012.07.015

[7] World Bank. (2023). *MENA Economic Update: A New Economic Landscape for South Asia's Western Frontier*. World Bank Group.

[8] World Bank. (2025). *MENAAP Regional Classification Framework*. World Bank Group.

[9] World Bank Open Data. (2023). *World Development Indicators*. https://data.worldbank.org

[10] Yasmin, B., & Khan, A. H. (2011). Trade openness: New evidence for labor-demand elasticity in Pakistan's manufacturing sector. *The Lahore Journal of Economics, 16*(2), 55–85. https://doi.org/10.35536/lje.2011.v16.i2.a3