# A comparative analysis of the architecture of railway station buildings in Iran and Turkey (1921–1978)

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**A B S T R A C T**

**Research Problem**
From the late 19th century and especially throughout the 20th century, railway stations emerged as one of the most significant symbols of modernization and transformative urban infrastructure, playing a central role in the spatial and cultural development of cities. The architecture of these stations, influenced by global trends and shaped in dialogue with local contexts, became a platform for the expression of national ideologies, official aesthetics, and modern technologies. These spaces evolved beyond their purely transportation-related function into symbolic, social, and cultural arenas that reflected state worldviews, the architectural tastes of their time, and major political and economic transformations. Given the geopolitical positions and shared historical trajectories of Iran and Turkey two countries that embarked on the path of modernization in earnest at the beginning of the 20th century railway stations in both nations became important tools for demonstrating state authority and manifesting national identity. However, each country followed a different path in its architectural engagement with modernity. Despite the overarching similarities in modernization goals, differences in governance structures, cultural backgrounds, and stylistic tendencies led to divergent architectural expressions of railway stations in Iran and Turkey, each reflecting a distinct interpretation of modernism and renewal. In Iran, styles such as adapted neoclassicism emphasized the order and grandeur of a central government, while in Turkey, a blend of early nationalist architecture followed by international modernism shaped the identity of station buildings. What remains as the core research problem is the absence of a comparative and systematic study analyzing the stylistic evolution, spatial conceptualization, and socio-cultural significance of these stations particularly during a period when both countries were simultaneously engaged in state-building efforts and the redefinition of national identity. This research aims to fill that scholarly gap by conducting a comparative analysis of prominent railway station examples from Iran and Turkey, in order to explain the architectural similarities and differences of these urban spaces and to examine their role in representing the discourse of modernization.

**Research Question**
This study seeks to address the central research question: "What are the differences and similarities in the architectural approaches to the design of railway stations in Iran and Turkey during the period 1921–1978 (1300–1357 in the Iranian calendar), and how are these distinctions connected to each country's historical, political, and cultural contexts?" Within this framework, the research aims to conduct a comparative analysis of the styles,

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forms, functions, and architectural concepts of railway stations, in order to explore how discourses of modernization and national identity-building were reflected in both countries. The study further aims to demonstrate how railway station architecture, as a form of modern public space, embodied different strategies for negotiating the relationship between tradition and modernity.

**Research Method**

This study adopts a quantitative-analytical approach and aims to conduct a comparative analysis of the architecture of railway stations in Iran and Turkey during the period 1921–1978 (1300–1357 in the Iranian calendar). Data collection was carried out through documentary and library research. The statistical population includes all railway stations constructed in both countries during the specified timeframe. From this population, eight stations were purposefully selected based on criteria such as historical significance, stylistic diversity, comparative potential, and availability of documented information. The selected Iranian stations are: Tehran Railway Station (IR-01), Ahvaz (IR-02), Tabriz (IR-03), and Mashhad (IR-04); and the selected Turkish stations are: Haydarpaşa Railway Station (TR-01), Sivas (TR-02), Izmir (TR-03), and Ankara (TR-04). Data analysis was conducted using a comparative matrix based on criteria such as spatial composition, functional organization, façade characteristics, and conceptual references. Additionally, to enable deeper interpretation, the study draws on semantic and interpretive approaches. To enhance the validity of the findings, data triangulation was employed, relying on multiple sources to cross-verify and support the research results.

**The Most Important Results And Conclusion**

This comparative study of railway station architecture in Iran and Turkey between 1921 and 1978 evaluated eight selected stations four from each country based on multidimensional criteria. The analysis encompassed five primary parameters: materials and technology, ornamentation and symbolism, cultural and climatic influences, contemporary transformations, and design constraints. The results revealed that Haydarpaşa (TR-01) and Ankara (TR-04) stations achieved the highest scores, each earning 22 out of 25, while Ahvaz station (IR-02) received the lowest with a total of 14. The average score for Turkish stations was 19.25, compared to 17.25 for Iranian ones, indicating a notable disparity in architectural coherence, design quality, and contextual responsiveness. Similar patterns emerged in the evaluation of four additional spatial and conceptual dimensions: spatial composition, functional organization, façade design, and symbolic references. Again, TR-01 and TR-04 topped the list with full scores of 20, whereas Mashhad (IR-04) and Sivas (TR-02) trailed with 14 points each. In this category, Turkish stations averaged 17.5, while Iranian stations scored slightly lower at 16.5. Quantitative analysis highlights how Turkish stations effectively integrated historic and modern styles, functional clarity, and meaningful references whether Ottoman or republican resulting in stronger spatial and identity-driven expressions compared to most Iranian examples. Notably, Tehran station (IR-01) stood out among the Iranian cases, earning 19 points in both evaluation sets. It showcased a compelling modern nationalist aesthetic through Art Deco motifs and a material palette of stone, concrete, and metal. Overall, the comparative analysis suggests that, despite contextual differences in climate, design policy, and investment levels, both nations emphasized spatial centrality, functionalism, and identity expression leading to a degree of conceptual and operational convergence. The comparative assessment of Iranian and Turkish railway station architecture from 1921 to 1978 demonstrates that although both nations employed these infrastructures as instruments of modernization and national identity representation, their architectural strategies diverged meaningfully. Turkey, by synthesizing Ottoman traditions with European modernism, succeeded in creating spatially coherent and aesthetically refined environments rooted in a distinct cultural identity. Conversely, while Iran sought to bridge tradition with modernity, certain stations fell short due to functional shortcomings and spatial inconsistencies. Both quantitative and qualitative analyses underscore the stronger performance of Turkish stations in terms of spatial cohesion, material quality, and conceptual clarity. The findings offer valuable insights for revisiting current railway design policies in Iran and developing context-sensitive models that align with contemporary cultural, environmental, and operational demands.