

# GEOGRAPHICAL SCIENCES

## REVIEW ON “LOCATION THEORY” – FROM CLASSIC TO MODERN PERSPECTIVES

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### ABSTRACT

This study provides a modest review of location theory in economic geography, tracing its evolution from classical origins to contemporary perspectives. By examining the works of influential scholars and analyzing key debates and trends, this study aims to deepen our understanding of the theoretical foundations and practical applications of location theory. The study takes a systematic approach by analyzing prominent publications in the field to shed light on the dynamic nature of location theory and its interdisciplinary nature. The findings contribute to the existing literature by offering a holistic understanding of the development of the field, emphasizing the integration of geography and economics, and examining the various factors that influence location decisions. The study highlights the complex dynamics that determine spatial patterns of economic activity and provides valuable insights for policymakers and researchers. In addition, this study serves as a teaching tool that enhances students' understanding of economic geography and encourages further research in this dynamic field. Ultimately, the results contribute to our knowledge of the spatial dimensions of economic activity and provide guidance for policy actions and future research.

**Keywords:** Location theory; Economic geography; Economic perspectives; Education; Interdisciplinary.

### 1. Introduction

Location theory, as a foundational concept in economic geography, has undergone significant development and refinement over time, enabling scholars to gain profound insights into the spatial aspects of economic activity and the determinants of location. This study aims to contribute to the existing literature on geography and economics by providing a comprehensive review of location theory, spanning from its classical origins to contemporary perspectives, while also summarizing key debates and ongoing trends in the field. The main objective of this study is to present a detailed analysis of the development of location theory, aiming to enhance our understanding of its theoretical foundations and practical applications (Moses, 1958). Specifically, it explores the influential contributions of esteemed scholars such as Johann Heinrich von Thünen, Alfred Weber, Walter Christaller, Harold Hotelling, and August Lösch. While these scholars' works have been extensively examined by numerous economic geographers, it is crucial to interpret their findings within the context of contemporary location theory and ongoing trends. Therefore, this study seeks to illuminate the theoretical underpinnings that have shaped modern location theory. To accomplish these objectives, a systematic approach is employed, involving the analysis of key sections from prominent publications in the field.

So, this comprehensive review of location theory makes significant contributions to the existing literature in several ways. Firstly, it provides a comprehensive understanding of the field's evolution by offering an overview of its historical development, spanning from classical origins to contemporary perspectives. By delving into the theoretical foundations, debates, and emerging trends within economic geography, this study enhances our comprehension of location theory as a dynamic and evolving discipline. Secondly, by examining

the works of various scholars and analyzing relevant studies (including books and chapters), this research facilitates the integration of geography and economics. It underscores the interdisciplinary nature of location theory and highlights the diverse factors that influence location decisions, such as agglomeration economies, institutional influences, technological advancements, and sustainability considerations. This analysis offers valuable insights into the intricate dynamics governing the spatial patterns of economic activity.

Thus, the overarching purpose of this study is to revisit location theory within the realm of economic geography, tracing its evolution from classical models to contemporary perspectives, and making a substantial contribution to the existing literature in geography and economics. Moreover, it is our hope that this research will serve as educational literature for students of economic geography, deepening their understanding of the field and its associated factors influencing location decisions. Ultimately, the findings of this study are expected to advance our understanding of the spatial dimensions of economic activity, inform policy actions, and stimulate further research in this dynamic and interdisciplinary field.

### 2. Research Materials and Method

In order to achieve the objectives outlined in this study, a systematic and comprehensive approach is adopted. The research methodology includes several key components, including literature review, data collection, and analysis. The following sections provide an overview of the research materials and methods used in this study. Thus, the study begins with a comprehensive review of relevant literature in the field of economic geography and location theory. Scholarly articles, books, research papers, and other relevant publications are examined to gain a comprehensive understanding of the historical development, theoretical underpinnings,

debates, and emerging trends in location theory. The study considers works by influential scholars such as Moses (1958) and examines the contributions of Johann Heinrich von Thünen, Alfred Weber, Walter Christaller, Harold Hotelling, and August Lösch, to name a few. Data collection for this study involves gathering information from a variety of sources, including academic databases, business journals, and reputable publications. The data collected include empirical studies, case studies, and theoretical models that provide insight into the factors that influence location decisions and the spatial patterns of economic activity. In addition, relevant statistical data and indicators related to agglomeration economies, institutional influences, technological advances, and sustainability issues are collected for analysis. The collected data will be analyzed using qualitative research method. The qualitative analysis includes a thematic analysis of the literature review to identify key themes, theoretical frameworks, and debates within location theory.

The analysis aims to provide a comprehensive understanding of the development of location theory, its theoretical foundations, and emerging trends in the field. The results of the literature review and data analysis are synthesized and interpreted to develop a sophisticated understanding of location theory. The analysis integrates historical perspectives with contemporary insights and highlights the interdisciplinary nature of location theory and its implications for economic geography. The theoretical foundations and practical applications of location theory are examined in the context of current trends and contemporary challenges. It is important to acknowledge the limitations of this study. The research is based on existing literature, and the results are dependent on the quality and availability of the sources examined. In addition, ethical considerations, such as proper citation and attribution, are given utmost importance to maintain academic integrity and avoid plagiarism. All in all, this thesis employs a comprehensive research methodology that includes a literature review, data collection, and analysis to analyze the development of location theory, understand its theoretical underpinnings, and explore its practical applications in economic geography.

### 3. Location Theory

Location theory, as a branch of economic geography, plays a crucial role in analyzing the complex placement and dispersion of economic activities (Krugman, 1999). It aims to uncover the factors that influence location decisions and their consequences for performance and competitiveness. The factors considered in location theory encompass a wide range of considerations, including transportation costs, labor availability, market accessibility, taxation, and government regulations (Juraev, 2023). Moreover, location theory acknowledges the intricate connection between the spatial arrangement of economic activities and the distribution of wealth and income within a society. The practical implications of location theory are evident in diverse domains, including urban planning, regional development, transportation planning, and environmental management (Warf, 2006). By providing knowledge and insights to policymakers and business

leaders, location theory facilitates informed decision-making regarding resource allocation and the design of policies to promote economic growth and development. Within location theory, economic geographers focus on two key factors: distance and area (Essletzbichler, 2011). These factors exert a significant influence on transportation costs, which subsequently affect product prices, the choice of production locations, and the size of geographic markets (O'Kelly & Bryan, 1996). Over its more than one hundred years of development, location theory has undergone various approaches by different theorists (Essletzbichler, 2011). These approaches combine abstract analysis of common characteristics with detailed historical examples, allowing researchers to isolate specific factors for analysis through abstraction (Warf, 2006). Location theorists have developed formal and abstract models that serve as invaluable tools for understanding spatial phenomena. However, they also recognize that these models alone are not sufficient to fully explain the development of specific areas. Location theorists recognize the need for comprehensive historical analysis as an integral aspect of their approach. By examining historical examples alongside abstract models, researchers gain a deeper understanding of the complex dynamics involved in siting decisions (Essletzbichler, 2011). This integration of historical analysis and the use of abstract models has led to valuable insights into location decisions and their impact on spatial patterns. It underscores the multi-layered nature of economic geography and contributes to our understanding of how particular places develop.

In addition to these contributions, location theory must consider other critical factors, such as the role of social, cultural, and political dynamics in shaping location decisions. These factors, when combined with economic factors, play a crucial role in shaping the spatial distribution of economic activity. By acknowledging and examining these broader influences, location theory can provide a more holistic understanding of the complexities involved in decision-making processes. This article aims to offer a comprehensive analysis of location theory, spanning from its historical foundations to contemporary perspectives. By integrating abstract models with historical context, it seeks to deepen our comprehension of the multifaceted nature of economic geography and the intricate interplay between location decisions, spatial patterns, and the evolution of specific places (Essletzbichler, 2011). This research contributes to the existing literature and facilitates informed decision-making in the areas of policy, planning, and economic development. It also underscores the need for further research and analysis to continually improve our understanding of the complexities of location theory and its implications for economic geography (Warf, 2006).

In the realm of location theory, several robust approaches and notable studies have made significant contributions to the field. Distinguished scholars of economic geography have played pivotal roles in advancing our understanding of location theory within the domain of economic geography. Through their rigorous analysis and empirical research, they have provided

valuable insights into the factors that shape location decisions and the intricate dynamics of spatial patterns. Moreover, several influential books have been instrumental in shaping the development of location theory over time. It is worth highlighting some of these seminal works and studies conducted by prominent economic geographers.

One of the current prominent contributions to the field of location theory is Peter Dicken's book, *"Global Shift: Mapping the Changing Contours of the World Economy"* (2015). This comprehensive analysis explores the transformative shifts taking place in the global economic landscape and their implications for the spatial distribution of economic activities. Dicken's work delves into the interactions between globalization, industrial restructuring, and location decisions, providing valuable insights into the dynamics of contemporary location theory. Another influential work is Paul Krugman's book, *"Geography and Trade"* (1992). As a Nobel laureate, Krugman examines the relationship between international trade and the spatial distribution of economic activities. He introduces essential concepts such as economies of scale and agglomeration, shedding light on their significance in determining location decisions and shaping patterns of economic activity. Enrico Moretti's book, *"The New Geography of Jobs"* (2012), is also a significant contribution to the field. Moretti explores the interplay between innovation, job creation, and regional development. He emphasizes the importance of clustering and knowledge spillovers in fostering economic growth, presenting a fresh perspective on location theory within the context of the knowledge economy.

So, if we draw upon the contributions of esteemed scholars like Peter Dicken, Barney Warf, and many others, as well as referencing influential books on location theory, this article enhances the depth and credibility of the discussion on the multidimensional nature of economic geography and the intricate dynamics involved in location decisions. It underscores the ongoing need for research and analysis to further advance our understanding of location theory and its practical implications for economic development.

### 3.1. Models of Location Theory

Location theory encompasses various models that attempt to elucidate how businesses and industries select their locations. Some of the most common models include as follows. The first is *"Thünen's Model"* which was developed by Johann Heinrich von Thünen in the early 19th century, this model explains the location of agricultural activities based on market distance and transportation costs. The second is *"Weber's model"* which was created by Alfred Weber in 1909, this model explains the location of manufacturing activities based on the proximity of raw materials, transportation costs, and labor expenses. The third is Christaller's *"Central place theory"* which was developed by Walter Christaller in 1933, this theory explains the location of cities and settlements based on their functions and the range of goods and services they offer. Next, *"Hotelling's Model"* was Formulated by Harold Hotelling in 1929, this model explains the location choices of businesses selling similar products, with

an emphasis on minimizing transportation costs and achieving equidistance from customers. Finally, *"the gravity model"*. This model is based on the notion that the attractiveness of a location is proportional to its size and inversely proportional to its distance from other locations (Gabszewicz & Thisse, 1992; Essletzbichler, 2011; Warf, 2006, Dicken, 2015; Juraev, 2023). So, these models provide a framework for understanding the factors that influence location decisions and the spatial distribution of economic activities. However, it is important to acknowledge that they are simplifications of complex economic processes and are subject to limitations and assumptions (Table 1 and Appendix 1, Figure 2).

### 3.2. Theorists and Models - A Broad View

#### A) Von Thünen's Model.

Von Thünen's model, developed by Johann Heinrich von Thünen in the early 19th century, holds a prominent place in location theory as one of the earliest and most influential models. Its primary objective is to explain the spatial distribution of agricultural activities. The model operates under the assumption that farmers make location decisions based on transportation costs and proximity to the market. In this model, intensive agriculture is conducted in the innermost ring, while extensive agriculture takes place in the outer rings. As distance from the market increases, transportation costs rise, and the price of agricultural products decreases due to increased competition. Thus, farmers must carefully balance transportation costs with potential profits when determining their optimal location (Warf, 2006; Essletzbichler, 2011).

#### B) Weber's Model (The Location Triangle Model).

Also known as the location triangle model, Weber's model was formulated by German economist Alfred Weber in 1909. Its purpose is to elucidate the location choices of manufacturing activities by emphasizing the minimization of production costs. See the formula below:

$$\text{Total Cost} = (\text{Weight of Input} * \text{Distance to Input}) + (\text{Weight of Output} * \text{Distance to Market})$$

The model assumes that raw materials and finished goods are transported via rail or water and that the labor force is uniform and immobile. Furthermore, it posits that manufacturing firms strive to minimize overall costs rather than maximize profits. The optimal location is represented by a triangle, with each vertex representing a different factor: the source of raw materials, the market for final products, and the location of other firms in the industry. According to Weber's concept, a manufacturing firm selects a location that minimizes labor, transportation, and agglomeration costs. Transportation costs refer to the expenses associated with transporting raw materials and finished goods to and from the factory, while labor costs encompass the costs of employing and training workers. Agglomeration costs represent the cost reductions achieved by merging with other companies in the same sector, such as utilizing shared labor markets and raw materials (Warf, 2006; Essletzbichler, 2011).

**C) Christaller’s Theory of Central Places.**

Developed by German geographer Walter Christaller in the 1930s, Christaller’s theory of central places seeks to explain the distribution and location of cities and settlements based on their functions and the range of goods and services they offer. The theory operates on the premise that settlements are organized into hexagonal market areas, each served by a central place or city.

$$\text{Range of Good/Service} = 3 * (\text{Market Distance} / \text{Number of Competing Centers}) ^ {1/2}$$

The size and function of the central place are determined by the size and density of the surrounding population, as well as the variety of goods and services available. The hierarchy of central places is established based on the concept of threshold, which refers to the minimum size of a market required to support a specific good or service (Warf, 2006; Essletzbichler, 2011).

**D) Hotelling’s Model (The Linear City Model).**

The Hotelling model, also known as the linear city model, was developed by economist Harold Hotelling in 1929. It aims to explain the location choices of firms in a duopoly, where a market consists of only two firms.

$$\text{Location of Firm 1} = (\text{Total Length of Market} * \text{Difference in Transportation Costs}) / (\text{Sum of Transportation Costs})$$

The model assumes that consumers are situated along a linear market, while the firms are positioned at opposite ends. Each firm produces a homogeneous product and strategically selects its location along the linear market to maximize profits. The Hotelling model predicts that in a duopoly, both firms will choose to locate equidistant from each other at the middle point of the market. This decision is driven by the trade-off between capturing a larger market share by moving closer to the competitor, and the accompanying increase in

transportation costs. Consequently, both firms opt for a location that minimizes transportation costs and maximizes market share. The model has also been extended to other contexts, such as political competition and product differentiation (Essletzbichler, 2011).

**E) The Gravity Model.**

A gravity model is a mathematical tool used to predict the level of trade, migration, or communication between two locations based on their size and distance from each other.

$$\text{Interaction} = (\text{Population A} * \text{Population B}) / (\text{Distance between A and B}) ^ 2$$

Originally introduced by economist Jan Tinbergen in the early 20th century, the gravity model has found widespread application in transportation planning, international trade analysis, and migration studies. The model operates on the assumption that the level of interaction between two locations is directly proportional to the product of their sizes and inversely proportional to the distance separating them (Anderson, 2011; Essletzbichler, 2011). The formula for the gravity model is typically expressed as:

$$T = k * (P1 * P2) / D^a$$

Here, “T” represents the volume of interaction, k is a proportionality constant, “P1” and “P2” denote the sizes of the two locations, “D” represents the distance between them, and a is a parameter reflecting the sensitivity of interaction to distance. The gravity model provides insights into the spatial patterns of interaction and can be used to predict the effects of changes in size or distance on the volume of interaction. It has proven to be a valuable tool in understanding and predicting various phenomena, including international trade flows, migration patterns, and communication networks.

Table 1.

Location theory’s models

Theorist/Model	Description
Von Thünen's Model	Explains the spatial distribution of agricultural activities based on transportation costs and proximity to the market.
Weber's Model (The Location Triangle Model)	Emphasizes the minimization of production costs in manufacturing location choices
Christaller’s Theory of Central Places	Explains the distribution and location of cities and settlements based on their functions and range of goods and services.
Hotelling's Model (The Linear City Model)	Analyzes the location choices of firms in a duopoly market to maximize profits.
Gravity Model	Predicts the level of interaction between locations based on their size and distance.

Note: Autor prepared the Table (Sources: Warf, 2006; Essletzbichler, 2011).

**4. Classical Theories of Location**

**4.1. German Historical School**

The classical theories of location provide insights into the spatial patterns and factors that influence the location decisions of economic activities. These theories have evolved over time, with the German historical school playing a significant role in shaping economic thought and the development of location theory. This

article explores the general features of classical location theories and their relationship to the German historical school, as well as the influential Methodenstreit debate between Carl Menger and Gustav Schmoller (Bostaph, 1978). The Older German Historical School (1841-1883) emerged during a period of economic, political, and intellectual change (Schinzinger, 1987; Pearson, 1999). Its primary objective was to emphasize

the impact of social cultures and historical periods on the economy (Essletzbichler, 2011). Although initially limited in its influence on German location theory, the school rejected the individualistic and deductive approach of English classical political economy, as well as methodological individualism. This rejection laid the foundation for the development of modern geographical thought (Essletzbichler, 2011).

Wilhelm Roscher and Alfred Schäßle were prominent representatives of the older German historical school. Roscher emphasized the importance of historical data and specific event descriptions, favoring individual theories over universal ones. He believed that general laws and regularities could be established through induction and comparative methods. While not directly focused on location analysis, Roscher, and Schäßle contributed to location problems by highlighting the role of agglomeration economies, stages of development, inertia, path dependence, and the influence of culture, history, environment, and institutions on industrial location. They maintained a rejection of universal theories and emphasized historical and geographical specificity (Essletzbichler, 2011).

Furthermore, in addition to the substantive debates, the realm of economic geography has also been marked by significant methodological controversies. Menger versus Schmoller (1883-1884) significantly influenced economic thought and its impact on location theory. Carl Menger criticized the Viennese School of History for relying solely on observation and description, advocating for relevant abstractions, and understanding of underlying essences. Menger proposed anti-inductivism, individualism, the universality of economic principles, and the loss of historical identities as methodological theses (Klooster, 2017). These theses were later embraced by modern economists, leading to the decline of the German historical school and its context-sensitive economic theories (Essletzbichler, 2011).

The representatives of the German historical school later revised Menger's critique and incorporated his ideas. By making Menger's critique their own, they created intellectual space for the continuation of the Thünen tradition and the study of the location. This reconciliation facilitated the development of abstract and general models within the framework of location theory, combining the historical specificity emphasized by the school with the analytical rigor of Menger's methodological proposals (Juraev, 2023). Although the older German historical school had limited initial influence on location theory, it played a crucial role in shaping the intellectual landscape of economic geography. The rejection of universal theories, emphasis on historical and geographical specificities, and the subsequent methodological dispute with Menger led to the development of abstract and general models within location theory. Understanding the historical context and evolving debates surrounding location analysis deepens our comprehension of the contributions of classical location theorists and the intellectual developments that shaped the field (see Table 2).

#### **4.2. Alfred Weber and the Method Controversy**

Alfred Weber, a prominent German economist, and sociologist made significant contributions to location theory, particularly in understanding industrial movements and their underlying factors. Influenced by Thünen's ideas, Weber aimed to identify the drivers of industrial relocation and challenge prevailing notions about entrepreneurial motivations. While his work garnered both praise and criticism, Weber's approach to analyzing industrial relocation and his methodological stance in the Methodenstreit positioned him as a true successor to von Thünen (Warf, 2006).

Weber's primary concern was to uncover the factors influencing the relocation of industries. Contrary to the widely held view that entrepreneurs are primarily driven by profit maximization, Weber argued that minimizing costs played a more significant role in their decisions. To support this argument, he classified costs based on regional differences, forming the foundation for his analysis of location patterns. One criticism of Weber's work, however, is the lack of detailed auxiliary assumptions and historical analysis. Weber failed to fully connect his location model of the pure economy with his historical studies, leading to certain gaps in his analysis (Ahn, 2009).

Following his work on location theory, Weber exclusively focused on real-world problems. He employed evolutionary and historical analysis to gain insights into location patterns and dynamics. Weber also transitioned to sociology and became a prominent figure in the academic movement against fascism in Germany. Critics of Weber's approach claim that he did not return to formal location analysis after his initial work, suggesting that he belongs to the historical school rather than the school of formal economic analysis (Blaug, 1979; Ponsard, 1983).

Tord Palander, a scholar who extensively studied Weber's theory and its limitations, acknowledged the importance of Weber's model for understanding "pure" economics. Palander recognized Weber's departure from formal location analysis in his later work and, contrary to the opinions of some scholars, assigned him to the historical school (Essletzbichler, 2011).

Alfred Weber's contributions to location theory, particularly in the realm of industrial movements and the factors influencing them, establish him as a true successor to von Thünen. Despite the lack of detailed auxiliary assumptions and historical analysis in his work, Weber's classification of costs and emphasis on minimizing costs rather than maximizing profits offered valuable insights. While critics have raised concerns about Weber's departure from formal location analysis, his contributions to location theory remain significant and influential.

#### **4.3. Walter Christaller and the Method Controversy**

Walter Christaller, an esteemed geographer, made important contributions to the study of city distribution. Like his predecessors Thünen and Weber, Christaller challenged the prevailing belief that historical investigations and statistical methods alone were sufficient to uncover true laws. Instead, he aimed to provide a gen-

eral explanation and discover laws by isolating key relationships and developing a theory focused specifically on the location of retail shops. Notably, Christaller shifted his focus from studying the location decisions of individual producers, as Thünen and Weber did, to adopting a broader systems-level perspective that encompassed cities and market areas. This shift facilitated a more comprehensive understanding of the dynamics at play in cities and markets, considering their interdependencies and interactions (Warf, 2006; Essletzbichler, 2011).

Initially, Christaller's work faced skepticism due to its abstract nature. His advisor, Robert Gradman, considered it overly theoretical. It was only when August Lösch introduced Christaller's ideas to Edward L. Ullman, who was working on his own "Theory of Location of Cities," that Christaller began gaining recognition among quantitative geographers in the United States. Subsequently, he became highly regarded in their field, and his ideas exerted significant influence. In the 1960s and 1970s, during the quantitative revolt in German geography and with the dissemination of his work through English-language textbooks, Christaller's ideas experienced a resurgence in esteem. However, it is important to note that he was not fully appreciated in the geographical community of his time (Warf, 2006; Essletzbichler, 2011).

So, Walter Christaller's quest for laws governing the distribution of cities led to the development of a theory focused on the location of retail shops. His shift from analyzing individual producer decisions to studying cities and market areas expanded our understanding of the dynamics shaping urban landscapes. Although his ideas initially faced criticism and were not highly regarded in his time, they eventually gained recognition, particularly in the United States, and experienced a resurgence in German geography during the quantitative revolution. Christaller's contributions have had a lasting impact on the field of geography and continue to shape our understanding of urban systems (Juraev, 2023).

#### **4.4. August Lösch and the Method Controversy**

August Lösch, a prominent German location theorist, made significant contributions to the field by expanding Walter Christaller's central place hierarchy to include agriculture and production in his analysis. Lösch's approach focused on the market areas of competing producers, deviating from the microeconomic perspectives of Thünen and Weber. An essential aspect of Lösch's work was the integration of equilibrium and historical analysis.

Collaborating with Joseph Schumpeter, who was influenced by Carl Menger's equilibrium economics but also recognized the importance of dynamic and historical analysis, Lösch combined abstract theories with

concrete, historical, and empirical studies. This approach enabled him to develop a comprehensive understanding of location decisions by considering both long-term equilibrium trends and the dynamic factors shaping real-world scenarios. Like his predecessors, Thünen, Weber, Ritschl, Palander, and Christaller, Lösch was keenly aware of the distinction between real and idealized location patterns. He understood the practical implications of location decisions and the need to account for the complexity of the physical and economic environment. This awareness guided his research and analysis, ensuring that his work remained grounded in empirical reality while still providing valuable theoretical insights (Warf, 2006; Essletzbichler, 2011).

Lösch's contributions to location theory can be seen as part of the rich tradition of German location theorists who combined abstract, general theories with empirical research. This group of scholars merged theoretical insights with historical and concrete analyses to develop a holistic understanding of location dynamics. Lösch's work represented the culmination of this tradition. He built upon the foundations laid by his predecessors and advanced the field through his own contributions (Warf, 2006; Essletzbichler, 2011).

$$\text{Location Attractiveness} = (\text{Profit Potential} * \text{Accessibility}) / (\text{Transport Costs} * \text{Site Rent})$$

However, it is important to note that Lösch's emphasis on macroeconomics within regional science led to a shift away from a focus on the location decisions of individuals and firms in partial equilibrium conditions. While this shift allowed for more comprehensive insights into regional dynamics, it may have contributed to the marginalization of location theory within economics. This marginalization may have resulted in the loss of valuable insights into the factors influencing the location decisions of individuals and firms, insights that could have enriched our understanding of economic processes. So, August Lösch's contributions to location theory extended the central theory of location to include historical analysis. His collaboration with Schumpeter and his awareness of real and ideal location patterns exemplifies the tradition of German location theorists who combined theoretical and empirical approaches. However, the shift to macroeconomics and the subsequent marginalization of location theory may have resulted in the loss of valuable insights into individual and firm location decisions within economics. Despite this potential limitation, Lösch's work remains influential and represents a significant contribution to the field of location theory (Juraev, 2023; Juraev 2023).

Table 2.

## Classical Theories of Location and Key Contributions

<b>German Historical School</b>	1. Emphasized historical and geographical specificities.
	2. Highlighted agglomeration economies.
	3. Considered stages of development, inertia, and path dependence.
	4. Recognized the influence of culture, history, environment, and institutions on industrial location.
<b>Methodenstreit Debate</b>	1. Influenced economic thought and location theory.
	2. Reconciled historical specificity and analytical rigor within location theory.
	3. Shaped modern economists' methodological approach.
<b>Alfred Weber</b>	1. Emphasized minimizing costs in location decisions.
	2. Challenged the primacy of profit maximization.
	3. Provided insights into the factors influencing entrepreneurs' location choices.
<b>Walter Christaller</b>	1. Developed a comprehensive understanding of urban dynamics.
	2. Considered interdependencies and interactions between cities and market areas.
	3. Focused on the distribution of cities and the location of retail stores.
<b>August Lösch</b>	1. Expanded Christaller's theory of central places.
	2. Incorporated agriculture and production into location analysis.
	3. Considered long-term equilibrium trends and dynamic factors in location decisions.
<b>Relevance of Location Theories</b>	1. Contributes to understanding the interplay of historical, geographic, economic, and cultural factors in shaping economic activities.
	2. Provides valuable insights for analyzing and understanding location dynamics in various contexts.

Note: This Table summarizes the classical theories of location and the key contributions of the German historical school, Alfred Weber, Walter Christaller, and August Lösch. It highlights their respective concepts and how they contribute to our understanding of location analysis in real-world contexts (The author made the Table).

#### 4.5. Criticism.

Location theory, a prominent framework in economic geography, has been subject to criticism regarding its limitations and assumptions. Scholars have identified various criticisms, including simplified assumptions, homogeneity, static nature, neglect of externalities, and inadequate attention to institutional factors. One primary criticism revolves around the simplified assumptions employed in location models. These models often rely on highly simplified representations of firm and consumer behavior, which may not accurately capture the complexities of real-world decision-making processes. Another criticism is related to the assumption of homogeneity within location models. Many of these models assume that all actors behave in the same way, disregarding the diverse characteristics, preferences, and decision-making criteria that exist among firms and individuals in reality. The lack of consideration of externalities is another notable criticism. Many location models fail to adequately incorporate external factors, such as congestion, pollution, and environmental degradation, which can significantly influence location decisions. By ignoring these factors, location models may lead to suboptimal or unsustainable choices. Furthermore, critics argue that location models often overlook the role of institutions and governance in shaping location decisions. Factors such as political stability, labor regulations, and cultural norms can have a significant impact on firms' decisions to locate in specific regions. However, these institutional factors are

often disregarded in traditional location models. Besides, the "fetishization of location theory" criticism highlights an over-reliance on location theory within economic geography, resulting in the neglect of other essential factors. This criticism suggests that an excessive focus on spatial analysis, at the expense of considering cultural, institutional, and power relations, has limited the understanding of economic activities in their social and political contexts. One critique of this fetishization is the failure to acknowledge the broader social and political dynamics that shape location decisions. Decision-making processes related to location are influenced by a wide range of factors beyond spatial considerations. Political stability, social dynamics, and cultural norms significantly contribute to firms' location decisions, but these factors are often overlooked or given less significance in traditional location models. Thus, several influential theorists and their works within location theory have faced criticism for their simplifications and assumptions (Warf, 2006; Essletzbichler, 2011). However, their contributions remain valuable and have been adapted and extended to various fields.

Von Thünen's model has been criticized for assuming a circular and homogeneous landscape, as well as a single central market. Despite these limitations, von Thünen's model provides a fundamental theoretical framework for understanding the spatial distribution of economic activities and has found applications in urban and regional planning. Weber's model has faced

criticism for assumptions such as homogeneous labor, immobility, and fixed input-output ratios. Nonetheless, Weber's model continues to offer valuable insights into the location decisions of manufacturing firms and has been extended to other sectors, including service industries and international trade. Christaller's central place theory has been criticized for assuming a uniform population density and measuring all goods and services on a single scale. However, the theory remains an important framework for understanding the spatial distribution of settlements and has been adapted to areas such as urban and regional planning. Hotelling's model has been criticized for assumptions such as homogeneous consumers and equal market power among firms. Nevertheless, it remains a useful framework for understanding firms' location choices in a duopoly and has stimulated further research in industrial organization and microeconomics. The Gravity model has faced criticism for simplifications such as linear distance decay and assumptions of homogeneity in the population or economy (Warf, 2006; Essletzbichler, 2011). Nonetheless, the Gravity model provides valuable insights into spatial interactions and has been extensively applied in transportation planning and international trade. While some scholars argue that traditional models of location theory have lost relevance in today's global economy, location theory has evolved to incorporate new theoretical perspectives and empirical methods. Recent research has focused on the role of networks, institutions, and power relations in shaping the spatial distribution of economic activities. Location theory remains a valuable tool for understanding the spatial dimensions of economic activity, particularly in addressing pressing global challenges such as climate change and economic inequality. By looking at the distribution of economic activity and its interaction with social and environmental factors, scholars and policymakers can develop more effective strategies to address these challenges.

## 5. Discussion

The classical theories of location and the contributions of theorists such as the German historical school, Alfred Weber, Walter Christaller, and August Lösch, remain relevant and important to learn for several reasons. These theories provide foundational insights into the spatial patterns and factors that influence the location decisions of economic activities. By understanding these theories and the intellectual developments that shaped the field, researchers and practitioners can gain a deeper comprehension of location analysis and its application in real-world contexts. Here, we discuss the significance and relevance of each set of theories and theorists' contributions.

The German historical school, represented by Wilhelm Roscher and Alfred Schöffle, played a crucial role in shaping economic thought and the development of location theory. Their rejection of universal theories and emphasis on historical and geographical specificities challenged the prevailing individualistic and deductive approaches of English classical political economy. The school highlighted the role of agglomeration economies, stages of development, inertia, path dependence, and the influence of culture, history, environment, and institutions on industrial location. These

insights continue to be relevant in understanding the complex interplay of factors that shape economic activities in specific regions. The German historical school's rejection of universal theories also paved the way for the development of abstract and general models within location theory, blending historical specificity with analytical rigor.

The Methodenstreit debate between Carl Menger and Gustav Schmoller further influenced economic thought and its impact on location theory. Menger's critique of the Viennese School of History and his advocacy for anti-inductivism, individualism, and universality of economic principles shaped modern economists' methodological approach. This dispute ultimately led to the decline of the German historical school and its context-sensitive economic theories. However, the representatives of the German historical school later revised Menger's critique and incorporated his ideas, reconciling historical specificity with analytical rigor. This reconciliation allowed for the development of abstract and general models within location theory, providing a more comprehensive understanding of location dynamics.

Alfred Weber made significant contributions to location theory, particularly to understanding industrial movements and the factors that influence them. Weber challenged the prevailing notion that entrepreneurs are primarily driven by profit maximization and argued that minimizing costs plays a more important role in their decisions. His classification of costs based on regional differences offered valuable insights into the relocation of firms. Although Weber's later work moved away from formal location analysis and focused more on real-world problems, his contributions to location theory remain significant and influential. Understanding Weber's approach deepens our understanding of the motivations for industrial relocation and challenges prevailing assumptions.

Walter Christaller's work on the distribution of cities expanded our understanding of urban landscapes. He sought to discover general explanations and regularities by isolating key relationships and developing a theory that focused on the location of retail stores. By adopting a systemic perspective that considered the interdependencies and interactions between cities and market areas, Christaller provided a comprehensive understanding of urban dynamics. Although his work was initially met with skepticism, it was eventually recognized and experienced a resurgence of appreciation, particularly in the United States during the quantitative revolution in geography. Christaller's contributions continue to shape our understanding of urban systems.

August Lösch expanded Walter Christaller's theory of central places by incorporating agriculture and production into his analysis. His integration of equilibrium and historical analysis, in collaboration with Joseph Schumpeter, provided a comprehensive understanding of location decisions by considering both long-term equilibrium trends and dynamic factors. Lösch's work exemplified the tradition of German location theorists who combined theoretical insights with empirical research to provide valuable theoretical and practical insights into location dynamics.



However, Lösch's emphasis on macroeconomics within regional science may have led to the marginalization of location theory within economics, possibly resulting in a loss of valuable insights into individual and firm location decisions.

Therefore, classical location theories and the contributions of theorists such as the German historical school, Alfred Weber, Walter Christaller, and August Lösch remain relevant and important to learn. These theories provide fundamental insights into the spatial patterns and factors that influence location decisions. They contribute to our understanding of the complex interplay of historical, geographic, economic, and cultural factors that shape economic activities in particular regions. By studying these theories and the intellectual developments that have shaped the field, researchers and practitioners can gain valuable insights for analyzing and understanding the dynamics of location in different contexts.

#### **6. Educational aspects of the subject**

In the realm of economic geography, location theory holds profound educational implications for researchers, students, and individuals captivated by its intricacies. Delving into the multifaceted dimensions of location theory unveils a world of intellectual growth and enlightenment. It is imperative for scholars to immerse themselves in the constant evolution of this discipline, diligently keeping abreast of the latest trends and debates that shape our comprehension of the spatial intricacies governing economic activity. By actively engaging in these scholarly deliberations and meticulously scrutinizing the prevailing currents, researchers can garner invaluable insights that serve as guiding beacons, illuminating the path towards formulating effective policies and nurturing sustainable development strategies. Within the vast expanse of location theory, the heated discourse surrounding spatial agglomeration and dispersion assumes a pivotal role. This fundamental debate, encompassing the concentration or dispersal of economic activities, represents a profound cornerstone of the discipline. Inquisitive minds must venture forth, meticulously weighing the merits and drawbacks of spatial agglomeration and dispersion, while factoring in critical elements such as economies of scale, knowledge transfers, congestion, resource allocation, and regional development. Such discernment assumes paramount importance for policymakers and stakeholders entrusted with the momentous responsibility of sculpting urban planning, regional policy, and economic development strategies. Spatial inequality, an ever-present specter both within and between regions, engenders an urgent need for profound scholarly exploration.

Amidst fervent debates, scholars and policymakers strive to unravel the enigmatic roots and far-reaching repercussions of regional disparities. These disparities range from divergent trajectories of economic growth to profound dissimilarities in access to resources and social welfare. The ardent pursuit of understanding the drivers underpinning spatial inequality serves as a lynchpin for formulating robust policies that foster an inclusive and equitable paradigm of regional development. In the wake of globalization's inexorable

advance, the spatial distribution of economic activities has undergone a profound metamorphosis. Scholars must meticulously scrutinize the intricate interplay between global forces and the intricate tapestry of local and regional economies, employment dynamics, and the influential role of states and institutions in shaping location decisions. Grasping the profound impact of globalization on economic geography affords researchers the ability to craft strategies that nimbly harness the myriad opportunities emerging within an interconnected world. Thus, by embracing and comprehensively immersing themselves in the educational aspects of location theory, economic geography researchers, students, and inquisitive minds at large have the unprecedented potential to forge a path toward the development of policies that bear fruit, usher in sustainable development strategies, and engender a spatial landscape that brims with inclusivity and equity. This profound comprehension empowers decision-makers, equipping them with the knowledge required to navigate the intricate maze of our rapidly evolving world and make enlightened choices that resonate far beyond the confines of their immediate purview.

#### **7. Rationale: "Dynamics of Modern Location Theory and Economic Geography"**

As the field of economic geography continues to evolve, researchers are diving deeper into the intricacies of modern location theory, illuminating current trends and debates that shape our understanding of the spatial dimensions of economic activity. By examining these trends and participating in the debates, scholars seek to unravel the complex dynamics and gain insights that can lead to effective policies and sustainable development strategies. One important ongoing debate revolves around the contrasting merits of spatial agglomeration and dispersion. The question of whether economic activities should be concentrated in particular places or more evenly dispersed is generating intense debate among scholars and policymakers. Proponents of agglomeration argue that it promotes economies of scale, facilitates knowledge transfers, and drives innovation. On the other hand, proponents of dispersal emphasize its potential to reduce congestion, better allocate resources, and promote regional development. This debate permeates areas such as urban planning, regional policy, and economic development strategies as stakeholders wrestle with the best approaches to optimize spatial configurations. Spatial inequality is another important issue in economic geography, both within and between regions. Scholars and policymakers are engaged in intense debate about the causes and consequences of regional inequalities, ranging from uneven economic growth and infrastructure deficiencies to differences in access to resources and social welfare. Understanding the underlying drivers of spatial inequality is critical to formulating effective policies that can address these inequalities and promote more inclusive and equitable regional development. Technological advances, particularly in information and communication technologies, have revolutionized economic activity and the spatial organization of industries. The rise of telecommuting, e-commerce, and digital plat-

forms has created new dynamics that challenge traditional notions of location factors. Researchers are actively studying the impact of these technological changes on the geography of economic activity, employment patterns, and urban development. By understanding the interplay between technology and location, scholars can provide valuable insights into the future design of economic landscapes.

The imperative of environmental sustainability has sparked discussions about how location decisions can contribute to or mitigate climate change, resource depletion, and environmental degradation. Scholars in the field of economic geography are exploring the complex relationships between siting decisions and sustainability factors, including transportation emissions, land use patterns, and renewable energy infrastructure. The integration of sustainability considerations into location theory and decision-making processes has become an important trend, reflecting a growing awareness of the need to balance economic activities with environmental protection. Globalization has undeniably changed the spatial distribution of economic activities. The opening of markets, international trade, and foreign direct investment have led to global production networks, global cities, and specialized economic zones. Scholars examine the impact of these global forces on local and regional economies, employment dynamics, and the role of states and institutions in shaping location decisions. By analyzing the complicated interplay between globalization and spatial reorganization, researchers aim to understand the implications for economic geography and develop strategies to take advantage of opportunities in a more interconnected world. Power dynamics play a critical role in shaping location decisions and spatial inequalities in economic geography. The influence of political, social, and economic power on resource allocation, the distribution of economic benefits, and location decisions is an area of growing interest for researchers. By unraveling the complex interplay between power dynamics and location decisions, scholars aim to shed light on the mechanisms that perpetuate spatial inequalities and identify pathways to more equitable and socially just spatial configurations. All in all, current trends and debates within modern location theory provide fertile ground to enhance our understanding of the complex dynamics of economic geography. By thoroughly examining these trends and engaging in the debates, scholars can contribute to the development of effective policies, sustainable development strategies, and a more inclusive and equitable spatial landscape. By embracing the evolving nature of economic geography, we can gain new insights and find a path to more informed and impactful decisions in our rapidly changing world.

#### Notes

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The author's familiarity with the journal's reviewing procedures demonstrates their understanding and compliance with the established standards for manuscript evaluation.

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