Rosenstein-Rodan and his time in Vienna*

Rosenstein-Rodan e seu tempo em Viena

DIOGO ALBERTO DE MORAES**
EDUARDO ANGELI***

RESUMO: O objetivo do artigo é entender o ambiente intelectual da formação acadêmica de Rosenstein-Rodan, bem como o contexto em que ele escreveu suas primeiras obras e seu conteúdo. Para esse fim, o artigo descreve o ambiente intelectual de Viena durante os anos de formação e início da carreira de Rosenstein-Rodan. Posteriormente, o artigo aborda algumas das obras, colaborações e interesses de pesquisa desenvolvidos pelo autor naquele período. Por fim, também explora sua saída da cidade em meio ao crescente antissemitismo, a extensa emigração de seus colegas e oportunidades de trabalho e pesquisa no exterior.
PALAVRAS-CHAVE: Rosenstein-Rodan; Escola Austríaca de Economia; Teoria do Desenvolvimento Econômico.

ABSTRACT: The aim of the article is to understand the intellectual milieu of Rosenstein-Rodan's academic training, as well as the context in which he wrote his first works and their content. To this end, the article outlines Vienna's intellectual environment during Rosenstein-Rodan's formative and early career years. Subsequently, the article addresses some of the works, collaborations, and research interests developed by the author in that period. Finally, it also explores his departure from the city in the midst of the rising anti-Semitism, the extensive emigration of his colleagues, and work and research opportunities abroad.
KEYWORDS: Rosenstein-Rodan; Austrian School of Economics; Theory of Economic Development.
JEL Classification: B13; B25; B31.

* The authors wish to thank André Roncaglia de Carvalho, Clara Sarasa-Aznar, Conrado Krivochein, Hugo Chu, Marco Cavalieri, and the anonymous referees. The usual caveats apply. This study was financed in part by the Coordination for the Improvement of Higher Education Personnel – Brazil (CAPES) – Finance Code 001.

** Master in Economic Development from the UFPR (Federal University of Paraná), Curitiba/PR. Brazil; e-mail: diogomoraes_idp@yahoo.com.br. Orcid: https://orcid.org/0000-0002-8064-1371.

*** Professor in the Department of Economics at UFPR (Federal University of Paraná), Curitiba/PR, Brazil. Researcher of CNPq (Brazilian National Council for Scientific and Technological Development). E-mail: angeli@ufpr.br. Orcid: https://orcid.org/0000-0001-6676-9267. Submitted: 6/February/2025; Approved: 3/April/2025.

1. INTRODUCTION

Paul Narcyz Rosenstein-Rodan (1902-1985) was an economist of Jewish origin born in Kraków, then part of the Austro-Hungarian Empire. He studied Economics at the University of Vienna, a city that was still a highly regarded intellectual center at the time, particularly for someone interested in Economics, even after the defeat in World War I and the end of the empire (ALACEVICH, 2021).

Initially focused on themes associated with the Austrian School – such as pure economic theory, marginal utility, and the role of time– his intellectual trajectory shifted markedly. This departure became evident in 1943, when he published an article addressing the challenges of industrialization in Eastern Europe and proposing strategies to overcome them. With this work, he gained prominence as one of the pioneers of the discipline of development economics.[1]

One of the first works that sought to demonstrate the evolution of his thought from the first publications in Vienna to the works on Latin America was published by Hosseini (1999). Silva (2005, chap. 1) evaluates Rosenstein-Rodan's work from a broad perspective, aiming to highlight the author's key contributions to the theory of development economics. More recently, Alacevich (2021) expanded the analysis of Rosenstein-Rodan's academic career, including unpublished writings. Through archival research, Alacevich recovered and reconstructed some important aspects of his life and thought, more specifically in the development area. None of these authors, however, have specifically focused on the first phase of Rosenstein-Rodan's career – his years in Vienna. In the aftermath of the Austrian-Hungarian Empire's collapse, those years held paramount significance in shaping his formation and development.

Hosseini (1999), similarly to Silva (2005, chap. 1), devotes about a page to the issue, addressing his research interests and providing a brief description of his publications. The same applies to Eßlinger (1999). Alacevich (2021), although more detailed, does not delve into the academic atmosphere of the city nor in the formation or functioning of its main research circles and seminars. Alacevich also overlooks Rosenstein-Rodan's teachers and major influences at the time – Mises and Mayer, for example, are mentioned only tangentially. Our article aims to explore these gaps, examining student perspectives, the University of Vienna's dynamics, and the Austrian School's context within the era's cultural and scientific milieu.

Our first interest in this article concerns the academic life of Rosenstein-Rodan in Vienna. The objective is to depict the environment as well as his experience

[1] In the words of Cardoso, "Rosenstein-Rodan can be considered the pioneer of pioneers among this generation of intellectuals who focused on the particularities of the underdevelopment of certain nations in the context of World War II and its immediate aftermath" (CARDOSO, 2018, p. 21, our translation). Specifically, regarding the article published by Rosenstein-Rodan in 1943, Cardoso (2018, p. 21-22, our translation) states that it "represents the foundational text of development economics."

within it. The former capital of the Austro-Hungarian Empire still occupied a prominent position in the European scientific and cultural scene, being one of the three best destinations to study economics at the time (ALACEVICH, 2021). The city's famous circles (or *Kreise*) were responsible for avant-garde developments in various areas of knowledge. In this regard, the academic background of a university student would be directly related not only to the disciplines studied at the University, but also to the discussion boards attended beyond its walls. Rosenstein-Rodan, in particular, was a regular at Mises' circle, Mayer's circle, as well as at the meetings of *Nationalökonomische Gesellschaft* (NOeG), the Austrian Economic Association (WRIGHT, 2016).

For the Austrian School, this setting allowed figures like Mises to debate independently of the University of Vienna, then influenced by political and anti-Semitic pressures (DEKKER, 2014). The resulting intellectual autonomy fostered multidisciplinary discussions on monetary economics, business cycles, socialist calculation, capital theory, international trade, and general equilibrium (HAGEMANN, 2010).

Following our characterization of the intellectual life in the city, our second interest is to approach the works developed by Rosenstein-Rodan during his time in Vienna. In addition to outlining his major works, we seek to understand how they tie into the broader debates of the time.

Lastly, the third interest of the article is to address circumstances surrounding Rosenstein-Rodan's departure from the city. First, we contemplate the deterioration of living conditions and the intense harassment of ethnic minorities, particularly Jews. We then explore the emigration of Austrian economists and the research and work opportunities that would impel the author to relocate to Italy and, later, England.

It is not clear when exactly Rosenstein-Rodan arrived in Vienna, nor when he left the city. According to Wright (2016), it is reasonable to assume that he arrived in 1920, as a student. With regard to the departure, Rosenstein-Rodan, in a letter to Avramovic, suggests that this took place in 1929 at the latest.[2] According to material from the Morgenstern archives consulted by Klausinger (2016), Rosenstein-Rodan presented a paper at a NOeG meeting on May 10, 1929 and another on December 20, 1929, which indicates that he was still in Vienna at the end of that year.[3] Alacevich (2021) leaves the question open, stating that Rosenstein-Ro-

---

[2] The Rosenstein- Rodan letter quoted per Avramovic is from 1982. It brings the following excerpt: "It is only later on after a year in Italy, 1929, and certainly in London that I became interested in economics as a basis for economic policy" (ROSENSTEIN-RODAN *apud* AVRAMOVIC, 1984, p. 223). It is worth noting that the wording permits interpretation of his departure for Italy as occurring in either 1928 or 1929.

[3] Strictly speaking, however, the absence of a title indication, in the Morgenstern archives consulted by Klausinger (2016), regarding Rosenstein-Rodan's December presentation may suggest that the seminar was scheduled but did not actually take place, which allows for speculation that the departure from Vienna could have taken place shortly before December 20, 1929.

dan would have left Vienna no later than 1930.[4] Thus, for the purposes of this article, we assume that his departure from Vienna did not take place before May – and possibly only in the last days of December – 1929.

2. VIENNA AND THE AUSTRIAN SCHOOL

Understanding Rosenstein-Rodan's training and early career requires contextualizing Vienna's academic life in the 1920s. The University of Vienna's relative marginalization (DEKKER, 2014) heightened the role of informal circles and seminars in cafes and private spaces, where central figures gathered disciples. These intersecting circles fostered a creative environment and, as Timms (2009, p. 21) notes, enabled a "rapid circulation of ideas."

Vienna's informal intellectual life prioritized social and cultural elements over the rigid, compartmentalized debates common in other European countries and the U.S. (DEKKER, 2014). Most academic activities occurred outside the University, largely due to the city's debate circles (*Kreise*) (TIMMS, 2009). In these forums, professors guided students through relevant literature and research, fostering thematic discussions where participants presented their findings. We must also consider developments within the Austrian School of Economics. This was the last period when the school's main figures lived in the same city; afterward, key authors moved abroad. Hayek became a leading proponent in England, while Mises played a similar role in the U.S. (VAUGHN, 1994, p. 62).[5]

2.1. The intellectual scene in interwar Vienna

At the end of the 19th century, Vienna witnessed a golden era in the arts and science. Dekker (2014, p. 30) highlights some leading examples in physics, psychology, visual arts, music, architecture, literature and cultural criticism. The interwar period also witnessed significant advancements in other fields of knowledge, including philosophy, social sciences, logic, and mathematics. A highlight was the famous Vienna Circle (*Wiener Kreis*).

Among economics-related circles, classical liberalism was not the norm. The Austro-Marxist circle, notably active, included figures like Rudolf Hilferding. Alongside it, economic discussions took place in the Mises circle (attended by Rosenstein-Rodan), the Vienna Circle, and groups led by Hans Kelsen, Heinrich Gomperz, Karl Menger (generally referred to as a mathematical colloquium),

---

[4] "By 1930, Rosenstein-Rodan was on the move and, thanks to a Rockefeller Foundation fellowship, he went to Italy" (ALACEVICH, 2021, p. 859).

[5] Vaughn (1994, p. 62), in her book suggestively titled "Austrian Economics in America: the Migration of a Tradition", mentions Schumpeter, Haberler, Machlup and Morgenstern among the Austrian economists who preceded Mises in his flight to the United States amidst the rise of Nazism.

Friedrich von Hayek (*Geistkreis*), and Othmar Spann (DEKKER, 2014, p. 36).[6] NOeG paper presentations also deserve mention.

It is worth mentioning that, according to Klausinger (2006), there were two strands of the Austrian School of Economics in the early 1930s: an Austrian-liberal strand, led by Mises and which had Hayek, Machlup, and Haberler among its young followers, and another, more reticent towards liberalism, led by Mayer and which included, among its ranks of young economists, Morgenstern, Gerschenkron, and Rosenstein-Rodan. This division will be better explored later in this paper.

Small but culturally dense, Vienna impelled its residents towards an interest in science and art (HÜLSMANN, 2007, p. 26).[7] University students and external listeners had opportunities to organize and attend seminars and debates on topics like literature, philosophy, psychology, art, and politics (CARVALHO, 2007, p. 18). This integration with intellectuals from diverse fields defined the city's vibrant intellectual life, making it "a unique and exciting place to be" (CRAVER, 1986, p. 1). However, the University's marginalization posed risks. The absence of formal institutions sometimes undermined the legitimacy of some authors' work and limited professional growth for participants in certain circles (DEKKER, 2014, p. 30). This led to future challenges, such as difficulties in relocating scientists due to the country's deteriorating political climate and scarce job opportunities.

Without relying on the University, meeting organizers turned to the city's cafes as suitable venues (TIMMS, 2009). According to Dekker (2014, p. 39), "for many Viennese these coffeehouses were much more than just a cafe, it was closer to a living room". It should be noted that the best cafés in Vienna carried editions of the main scientific, artistic, and literary journals (HÜLSMANN, 2007, p. 25).

Despite the practicality of Vienna's multifunctional coffeehouses, *Kreise* also met in salons, offices, and private homes. Many intellectuals came from noble backgrounds with ample resources (DEKKER, 2014). Some held prestigious public positions, even influencing appointments to certain offices (DEKKER, 2014, p. 40).[8]

2.2. The meetings attended by Rosenstein-Rodan

As previously mentioned, the economics department at the University of Vienna gradually lost ground to private seminars and research institutes, particularly the *Österreichisches Institut für Konjunkturforschung*, the Austrian Institute for Business-Cycle Research, created by Mises between 1926 and 1927.

---

[6] Dekker (2014, p. 36) offers a diagram relating the main economic circles, their participants, and the degrees of relationship between them. For more on this topic, see Wright (2016).

[7] Vienna's vibrant interwar cultural and intellectual life starkly contrasted with Austria's political and economic turmoil. After losing World War I, the empire collapsed, replaced by a small republic plagued by inflation, economic depression, civil war, and eventually, Nazism and German invasion (HABERLER, 1961).

[8] Mises, for example, hired Hayek as director of the Austrian Institute for Business-Cycle Research. And Hayek, in turn, would hire Morgenstern as his assistant (DEKKER, 2014, p. 40-41).

Rosenstein-Rodan was a regular participant in two seminars: Mayer's seminar, founded in 1924 and which, according to Kirzner (1987), took place at the University; and Mises's, created in 1919 and whose members met at the Chamber of Commerce, where he worked. Rosenstein-Rodan regularly attended the meetings of the NOeG as well, which was reestablished in 1927 after its initial existence from 1918 to 1920 (WRIGHT, 2016).

According to Craver (1986), the Department's crisis began after Böhm-Bawerk's death (1914) and the retirements of Philippovich (pre-War) and Wieser (1922). Chairs were filled by Carl Grünberg (later replaced by Degenfeld), Othmar Spann, and Hans Mayer, bypassing figures like Schumpeter or Mises (CRAVER, 1986, p. 2). Mises' Jewish background, liberal views, and intolerance for incompetence reportedly hindered his appointment (BOETTKE et al., 2016).

Mayer, recommended by Wieser, quickly disappointed colleagues. Craver (1986) notes that Mayer struggled to articulate his ideas, leaving articles unfinished and producing inconsistent, error-ridden publications (CRAVER, 1986, p. 8). He was a staunch proponent of Wieser's thoughts, asserting that the Austrian theory was "value free" and, as such, should not be aligned with the liberal values advocated in 1922 by Mises, in his book on socialism. Furthermore, he understood that the problem of imputation (and, consequently, the theory of value, another topic of interest to Rosenstein-Rodan in the 1920s, as will shall see),[9] an issue to which he devoted seminars throughout the 1920's, was central to economic theory and that Wieser proposed the best approach to the issue (CRAVER, 1986, p. 10-11).

Craver (1986) notes that Rosenstein-Rodan, Morgenstern, and Gerschenkron, as Mayer's assistants, had to attend his seminars, which sometimes included German scholars like Landauer, Lederer, and Vleugels. Rosenstein-Rodan and Morgenstern were likely Mayer's most ardent supporters, crediting him with insightful ideas on the role of time in economic analysis. Mayer, in turn, was a strong advocate of Rosenstein-Rodan's ideas, including those that later shaped the cobweb model.

It was no secret that mathematical formalizations were out of interest to many economists of the Austrian School. The scholarly literature does not neglect Karl Menger's paradoxical interest in mathematics, given his father's (the famous economist Carl Menger) disdain for the discipline (CARVALHO, 2007, p. 166).[10] But apparently Mayer was taking the issue to an extreme level. Gerschenkron (CRAVER, 1986) notes that Mayer's lectures lacked mathematics and, despite their importance at the University, offered little insight into economics or external research. Karl Menger adds that Mayer once discouraged him from publishing an article for being "too mathematical" (CRAVER, 1986, p. 12).

---

[9] On Mayer's contribution to the problem of imputation, see Kauder (1965, chap. 17).

[10] Dissatisfaction with Mises' opposition to mathematics spurred Karl Menger to found the Mathematical Colloquium in the late 1920s, which became a key hub for economic discussions in Vienna. Participants included Morgenstern, von Neumann, and Wald (DEKKER, 2014).

In any case, Mayer would guarantee lectureship to several young economists. Among the beneficiaries of this prerogative stand out Haberler, Morgenstern, and Hayek. Machlup, Braun, Rosenstein-Rodan, and other Jewish students would not have the same chance (KLAUSINGER, 2015).[11] Still according to Klausinger (2015, p. 287), even when prevented from teaching, Rosenstein-Rodan assumed (together with Morgenstern) the editorship of the *Zeitschrift für Nationalökonomie* in 1929.[12]

Although the economics field of the University of Vienna no longer seemed to resemble the glorious days of the past, the city's cafés awaited students and young economists, offering not only the comforts of a living room, but also access to an intricate network of informal institutions that, when properly articulated, enabled them to access a wide range of ideas and spaces for constructive debate (CRAVER, 1986, p. 13).

Among the most important debate circles of the time for the economic sciences was the Mises *privatseminar*, of which Rosenstein-Rodan was also a member (DEKKER, 2014; CRAVER, 1986; WRIGHT, 2016). Started in October 1919 (HÜLSMANN, 2007, p. 365), with about 25 to 30 men and women as regular participants – both economists and non-economists, selected and invited by Mises among the most distinguished graduates of the University of Vienna – the group gathered fortnightly between October and June (KIRZNER, 1987; MISES, 2013; SCHULAK; UNTERKÖFLER, 2011, p. 107).[13] If not from the beginning, but certainly sometime later, the seminars were held at the Chamber of Commerce, where Mises worked, and only those with doctoral degrees were admitted (HÜLSMANN, 2007, p. 365).

According to Mises, the private seminars he offered had no direct connection either with the University or the Chamber.[14] The activities were simply carried out in that space, eventually receiving foreign guests (MISES, 2013, p. 67). According to Haberler's account (1961), meetings began with the presentation of a paper by Mises or another participant on economic theory, economic policy, social science

---

[11] According to Klausinger (2015, p. 283) "Franz X. Weiss, whose application had still been supported by Wieser (…) in 1925 had become the last Jewish scientist to obtain a lectureship from the faculty". This issue will be discussed later, with a view to understanding the context of Rosenstein-Rodan's departure from Vienna.

[12] The publishers of this journal during its (re)establishment – it was the successor of another journal that had ceased publication in 1927, as will be detailed below – were Hans Mayer, Richard Reisch, and Richard Schüller. Its editors were Morgenstern and Rosenstein-Rodan. According to Schulak and Unterköfler (2011, p. 110), "[t]he first volume boasted a good 800 pages – with a total of forty-three essays and shorter contributions – plus eighty-three collective and individual reviews of altogether fifty-nine national and international authors, and a non-German speaking readership was expressly targeted with abstracts of every essay in English and French."

[13] According to Mises (2013, p. 67) and Hülsmann (2007, p. 462), the meetings were fortnightly, while Haberler (1961) states that the meetings were weekly. None of them specifies whether such periodicity refers to a specific moment.

[14] As Kurrild-Klitgaard (2003) points out, a common confusion is between Mises' *privatseminar* and the seminar he conducted as an extraordinary (i.e., off-career) professor at the University.

methodology, and sociology. Afterwards, a heated discussion ensued between the participants, usually followed by a trip to a restaurant where the conversations continued for a few more hours.

While there are no records of specific topics covered in Mises's seminars (KURRILD-KLITGAARD, 2003), Hülsmann (2007, p. 462) observes that from 1924 onward, they became more philosophical and interdisciplinary, as fewer participants had formal economics training. These seminars played a key role in developing the Austrian critique of centralized economic planning, refining ideas on business cycles, capital, and money (DEKKER, 2014, p. 35).

Despite the aforementioned variety of topics discussed and presenters at Mises' seminars, it is interesting to take note of Mises's research interests at the time, which were certainly the subject of reflection and discussion at seminar meetings as well as in conversations outside of it. During the second half of the 1920s – therefore, when Rosenstein-Rodan attended his seminars – Mises had just published two of his main works, namely an article (from 1920) and a book (from 1922) addressing the problem (of the impossibility) of economic calculation under socialism (MISES, 1990, 1962).[15]

In 1927, Mises published *Liberalismus*, defending classical liberalism and criticizing fascism, consistent with his 1922 critique of socialism. In 1928, Mises published a book (which, according to Greaves, 1977, had probably been completed earlier that year) on currency, business cycles, and economic policy, summarizing the discussion of the 1912 book that had made him famous. In the 1928 book, *Monetary Stabilization and Cyclical Policy*, Mises criticized the use of monetary policy to pursue an indefinite stability of the purchasing power (or value) of the currency and control of the interest rate. Mises, at the same time, also published some works on interventionism, which comprised his book published in 1929, *A Critique of Interventionism*, where he espouses his critique of the interventionist system as an alleged halfway point between the market system and socialism (MISES, 2011).[16]

The popularity of Mises's seminar would, as he himself admitted, be the envy of Mayer and his colleague Spann.[17] Corroborated by the student's reports, Mises mentions cases of discrimination at the University against those who attended his

---

[15] No precise information has been found on when Rosenstein-Rodan became a regular participant in *Miseskreis*. However, considering that, in general, the participants already had a doctorate when they were invited by Mises, it is reasonable to consider that such presence began sometime in the second half of the 1920s.

[16] The book comprises six chapters: one published in 1923, another in 1925, three in 1926, and one previously unpublished. Margit von Mises (1976), Ludwig von Mises' widow, stated that the articles were written in the early 1920s. This affirmation, however, seems to be inaccurate, as the book references later works, including a critique in chapter 2 of a 1928 text by Schmalenbach, as noted in Mises' introduction

[17] The list of regular participants in Mises' seminars brought by Wright (2016) has 31 names, while Mayer's has only 10.

seminars – which is why he did not make a point of registering all those present. In some cases, they were prohibited from accessing the library if they did not register for the seminars of at least one university professor (MISES, 2013, p. 65). However, this did not prevent Hayek, Morgenstern, Haberler, Machlup, Karl Menger, and Rosenstein-Rodan from attending it (DEKKER, 2014).

Another key meeting place for Vienna's economists was the NOeG.[18] To understand Rosenstein-Rodan's intellectual environment, it is essential to examine the association's revival in late 1927, after a seven-year hiatus. It continued operating after Rosenstein-Rodan left Vienna but suspended activities from Austria's 1938 annexation until the end of World War II (KLAUSINGER, 2016).

The NOeG's revival aimed to unite the two Austrian School branches led by Mises and Mayer. Rosenstein-Rodan was elected to its board. Unlike the more exclusive *Kreise*, the NOeG facilitated broader discussions, involving more participants and allowing foreign visitors to present papers (KLAUSINGER, 2016). From December 1927 to December 1929, 17 articles were presented – 14 with known titles – mostly on pure economics, particularly monetary and cycle theory. While most presenters were Vienna-based, occasional foreign guests maintained international academic exchange.[19]

Rosenstein-Rodan was the most frequent presenter of papers. Still according to archival materials collected by Klausinger (2016), during the period under analysis, Rosenstein-Rodan presented three works: on June 22, 1928, May 10, 1929, and December 20, 1929. In turn, Mises, Hayek, and Morgenstern presented two works each. Rosenstein-Rodan's first article was the paper he published in 1929, which we shall analyze in the next section, regarding the role of time in economic theory. The second was titled "Liberalismus und Grenznutzentheorie" ("Liberalism and Marginal Utility Theory"), but no copy of this work was found in our present research. Finally, Klausinger (2016) does not provide information about the title of the work presented by Rosenstein-Rodan at the end of December, which, as previously mentioned, allows us to speculate that perhaps the author had already left Vienna by then.

Thus, academic life in Vienna stood apart from its European and American counterparts due to its informal, decentralized structure, fostering knowledge production and dissemination. This unique milieu shaped economists' education, encouraging broader perspectives beyond economic science and regional confines, while breaking free from restrictive hierarchical and formal structures.

---

[18] A list of regular participants in the NOeG seminars can be found in Wright (2016).

[19] "During these years, the Austrian School intensified its contact with foreign economists by recurrently inviting them to lectures or events – particularly to those at the Mises-*Privatseminar* or at the *Nationalökonomische Gesellschaft*" (SCHULAK; UNTERKÖFLER, 2011, p. 110).

3. ROSENSTEIN-RODAN'S PUBLISHED WRITINGS WHILE IN VIENNA

Before he became one of the pioneers of the discipline of development economics, Rosenstein-Rodan took his first steps into academic publishing by discussing marginal utility from a "highly theoretical" perspective (ALACEVICH, 2021, p. 858). According to Hosseini:

> During his early years, he had no interest in economic policy, and did not work in applied economics. His writing career began in Vienna during the 1920s when he wrote as a pure theorist, working on marginal utility theory, the role of time in economic theory, and monetary theory. He was also interested in the history of economic thought (HOSSEINI, 1999, p. 119).

In a letter to Avramovic (1984, p. 223), Rosenstein-Rodan makes some interesting remarks. He says that, in Vienna in the 1920s, his interest included themes linked to the theory of choice and the theory of utility (in the Austrian version).[20] Just like Menger, Böhm-Bawerk, Mayer, and his other precursors, Rosenstein-Rodan understood applied economics as an area of no greater value. In his own perspective, his interests would change after his departure from Vienna. In Italy and later in England, his attention would turn to the application of economic science in the sphere of public policy. About the period that preceded this shift in interests, the author writes:

> In the Vienna days I published the main article on marginal utility in 1927 (…), but it is not worth referring to; these are past days. The same applies to one article on complementarity in Italian, which is quoted by J. R. Hicks as having stimulated him in his theory, but is also antediluvian. More important is an early version in 1929, No. 1 of Zeitschrift fur Nationalökonomie on "The Role of Time in Economic Theory", which had its second and considerably modified appearance in Economica in 1934. That one influenced somewhat my interest in development theory later on (ROSENSTEIN-RODAN *apud* AVRAMOVIC, 1984, p. 223).

Apart from analyzing the interests that drove his work in the period, this section deals with the textual productions for which he was credited. Furthermore, we briefly address the repercussions of his ideas on his future theoretical developments in 1943, at the birth of the discipline of economic development.

We found two articles published by Rosenstein-Rodan before leaving Vienna. The first, published in 1927 in the fourth edition of the *Handwörterbuch der Staatswissenschaften*, was titled *Grenznutzen*, or "Marginal Utility". It was translated

[20] Hagemann (2010) highlights the fields of knowledge to which the Austrian School contributed in the interwar period: monetary theory, business cycle theory, the socialist economic calculation debate, capital theory (and the role of time in economics), game theory, and general equilibrium theory.

into Japanese in 1930, into Italian in 1933, and finally into English only in 1960 (EßLINGER, 1999; HOSSEINI, 1999).[21] In the words of Schumpeter (2006, p. 1022, n. 1), it constituted a "brilliant and compact survey of arguments and counterarguments" referring to the theory of value espoused by the Austrians. For Blaug (1985, p. 368), the text provides an extraordinary notion about the utilitarian doctrine in Europe at the time of the First World War.

Although relevant – especially considering that Rosenstein-Rodan was a participant in Mayer's seminars[22] – this work dealt with a controversial topic. According to Schumpeter (2006, p. 1022), the Austrian approach to the theory of value faced opposition from German economists, who insisted on associating this theory with hedonism. Thus, according to Schumpeter, the Austrians took upon themselves the task of ridding their theory of any hedonistic traces.[23]

Rosenstein-Rodan's 1927 text addressed an important issue for the Austrian School, namely, the question of how individuals made their choices. According to Leen (1992), the first marginalists dealt with the problem of "economic calculation" in the sense that individuals would need to determine their own consumption under certain restrictions, which would require a series of complex and costly mathematical calculations which, in real life, could not be done. Under these conditions, still according to Leen (1992), the Austrians – unlike their marginalist peers who followed the Swiss and English lines – were concerned with a realistic depiction of an abbreviated economic calculation process.

Leen (1992) interprets Rosenstein-Rodan's 1927 article as an exposition of the necessary conditions to render abbreviation viable in economic calculation, something neglected by the English and Swiss strands of marginalism. According to the text, most of the individual needs are constant over time. Initial equilibrium is originally achieved by trial and error. And, once in equilibrium, the marginal utilities provided by the goods serve as a benchmark (or shortcut) for different types of consumption to be compared based on their incremental impact, so that the economic calculation can occur efficiently in the real world (LEEN, 1992).

According to this concept, the central function of marginal utility would be to abbreviate economic calculation. The analysis of the additional effects of a given consumption would dispense with a complete review of the economic plan in the event of a change. This concept is consistent with Böhm-Bawerk's ideas, who ar-

---

[21] In a letter to Avramovic (1982, p. 223) in the 1980s, Rosenstein-Rodan states that the translation into Italian is from 1930. We were unable to find this translation for our research. Eßlinger (1999) provides the reference to the Italian translation of 1933.

[22] See Kauder (1965, especially chap. 15).

[23] On the problematic relationship between utilitarian theory and utilitarian philosophy, Schumpeter dismisses the logical need for an association between marginal utility theory and utilitarianism. The responsibility for such confusion, in the author's view, is attributable to a "historical alliance" (SCHUMPETER, 2006, p. 1056) between utilitarian philosophy and utility theory, in addition to their main exponents, for being convinced utilitarians.

gued that economic calculations are performed by individuals with great ease (LEEN, 1992).

Moscati (2013), in turn, contextualizes Rosenstein-Rodan's first work from a different angle. According to him (MOSCATI, 2013), Pareto sparked off, in 1909, an "ordinal revolution" in Economic Theory that lasted until 1940. It was during this revolution that the notion of cardinal utility, as currently used in certain areas of microeconomics, would have developed, consolidating its definition between the 1930s and 1940s, and gaining ground from the advent of the expected utility theory in the mid-1940s.[24]

In the context of the ordinalist revolution, some economists, based mainly at the University of Vienna, Harvard, and the London School of Economics, among which Rosenstein-Rodan, developed between the 1920s and 1930s a discussion based on an idea launched by Pareto. The latter, a critic of the measurability of utility in general, argued in 1909 that utility could be measured in the special case in which individuals were able not only to rank consumption alternatives, but also to classify (or order) transitions between different combinations (or baskets) of goods and assign a representative degree of how much one transition is preferable to another. Even so, he deemed this last condition impossible, which led him to discard the practical possibility of measuring utility.

We must thus understand the article published in 1927 by Rosenstein-Rodan within this theoretical context. For Moscati (2013), in 1927 Rosenstein-Rodan accepted that individuals are able to classify utility differences, but, akin to Pareto, denied that they could quantitatively establish such a difference.

According to High and Bloch (1989), the Austrians sought to develop a utility theory that did not rely on cardinality. Descendants of Menger, they used discrete units of goods to rank them. When neoclassical theorists in the early 20th century realized that cardinality wasn't necessary for constructing demand curves, they feared abandoning it due to its impact on welfare theory. In contrast, the Austrians dismissed the need for cardinality and interpersonal utility comparisons in welfare theory. Despite adhering to ordinality, they maintained the principle of diminishing marginal utility. Rosenstein-Rodan's 1927 article, for High and Bloch (1989), clearly illustrated this.

Rosenstein-Rodan's subsequent publication would come in 1929, in the first issue of *Zeitschrift für Nationalökonomie*, from a paper he presented at the NOeG on June 22, 1928.[25] This article by Rosenstein-Rodan is quoted in the literature as

---

[24] For Moscati (2013), the leaders of the Marginal Revolution (Menger, Jevons, and Walras) did not exactly adopt the notion of cardinal utility (which he associates with later developments in economic theory), but were concerned with measuring utility in the sense of ascertaining the possibility that the utility of one good could be expressed as the multiple of the utility of another good, taken as a measure.

[25] This 1929 article served as the basis for part of a text published by Rosenstein-Rodan in Economica in 1934, therefore after his departure from Vienna. According to Alacevich (2021), the 1934 text was an article motivated by a debate between Kuznets and Souter regarding the relationship between business cycle theory and economic theory.

having been published in 1929, and sometimes in 1930. In a letter to Avramoci, the author himself writes that the publication took place in 1929 – therefore, very likely before he left Vienna, as explained in the introduction to our article. This divergence may be derived from the fact that, according to Klausinger (2016), the initial issues of *Zeitschrift für Nationalökonomie* showed a discrepancy between the volume year and calendar year.

In the text, Rosenstein-Rodan addresses the problem of the delayed adjustment to equilibrium that could ultimately result in a non-convergent oscillation process. This discussion, also developed by authors such as Henry Schultz and Jan Tinbergen, would culminate in the theory that Nicholas Kaldor called "cobweb theory" (CHAKRAVARTY, 1983; HOSSEINI, 1999). Rosenstein-Rodan, according to Chakravarty (1983), had the insight of exposing the problem in terms of speeds of adjustment – the argument being that adjustments are not instantaneous, which would have an impact on equilibrium and the trajectory to it.

The example that Rosenstein-Rodan presents in this text is that of a dog chasing a hare. At each moment, the dog notices that the hare changes its location, which leads him to reformulate his trajectory so that his distance from the hare is the smallest at that given moment. Similarly, in the economy successive adjustments occur at each moment in time. Hence the importance of studying the trajectory towards equilibrium (which, in the illustration, would be the hare). As Chakravarty (1983, p. 74) puts it, the cobweb theorem would still figure in texts by Leontief, Samuelson, and Lange, as well as Arrow and Hurwicz. The same author also draws attention to the importance of the theme of time as a link between Rosenstein-Rodan's works in his youth and those he would produce in his maturity.

Still in relation to this text, it is worth mentioning that, as Boehm (1992) suggests, Rosenstein-Rodan was a precursor of what would be developed by his contemporary Viennese peer, Hayek, above all from 1937, in the form of the "knowledge problem". This problem addressed how the incomplete knowledge possessed by individuals, in which total knowledge is diffused in society, ends up being spread and used through the market process, with the price system playing a fundamental role. Hayek thus defined equilibrium as the situation in which there is compatibility of plans among the agents, established by each agent based on their possessed knowledge. Hayek's criticism was directed towards the economists' inclination to study equilibrium states, rather than how the economy would tend to equilibrium. Rosenstein-Rodan's 1929 publication may be viewed as having some insights that Hayek would build upon in the future (1937).[26]

As such, we find that Rosenstein-Rodan's work in Vienna had a more theo-

[26] As Boehm (1992) notes, the version originally published by Hayek in 1937 of the classic article "Economics and Knowledge" includes an acknowledgment of influence and citations to people associated with Hans Mayer's circle, particularly Morgenstern and Rosenstein-Rodan. He also claims that his discussion of equilibrium, while not precisely the same as Mayer's, benefited from Mayer's contribution. However, in the version of the article published in 1948 as part of the book *Individualism and Economical Order*, Hayek withdrew such acknowledgements.

retical nature, in line with some of the internal debates of the Austrian School, as well as with discussions conducted by authors based outside of Vienna. At first glance, such works do not show any greater connection to the author's later phase, which consecrated him as one of the pioneers and exponents of development theory since his epochal article of 1943. However, it has been discussed in the literature (e.g., Eßlinger, 1999) that this impression may be false – which, of course, does not mean that all the necessary elements for Rosenstein-Rodan's subsequent works were somehow present in the author's first publications.[27]

Rosenstein-Rodan, in a correspondence with Avramovic in the 1980s (AVRAMOVIC, 1984), acknowledged that he only became interested in economic policy issues after leaving Vienna, even though the 1929 article served him indirectly, insofar as it provided the foundation for the third section of a text published in 1934 – in this case effectively reflecting his change of interests, according to Rosenstein-Rodan himself.

Avramovic (1984), however, reports that, a few days later, he asked Rosenstein-Rodan to clarify whether some theoretical elements necessary for his theory of development were already present in his days in Vienna. In response, Rosenstein-Rodan, in other correspondence, suggests that Avramovic's impression was correct: "I agree that the earlier micro-theory was relevant to development theorists very largely because the Austrian School (unlike the Lausanne School) paid major attention to the path towards equilibrium and not only to the conditions of stability which must be satisfied if a point is to be a point of equilibrium" (Rosenstein-Rodan, 1982, *apud* Avramovic, 1984, p. 223).

Avramovic then resorts to Chakravarty's text (1983) to understand this connection. Of the works dealt with in this article, Chakravarty (1983) mentions the text on Marginal Utility, published by Rosenstein-Rodan in 1927, which addresses the issue of complementarity, which would be later developed in an article from the 1930s and comprise a relevant section in the 1943 article, when Rosenstein-Rodan discussed the issue of planning – an opinion shared by Hosseini (1999), who also extends this argument to Rosenstein-Rodan's articles after the 1943 publication.

Chakravarty (1983) interprets that Rosenstein-Rodan's articles prior to the Second World War (therefore, a broader study case than the period addressed in our present work) dealt with the question of time, insofar as they analyzed the

[27] According to Avramovic, "[t]here is no doubt in my mind that the catastrophic experience of the 1930s was a major influence on the evolution of Dr. Rodan's doctrine. Implicit in the 1943 thesis was the assumption of a limited absorptive capacity of the world market. This and the example of Soviet planning must have had an effect on the Chatham House group studying the future of Eastern Europe, over which Dr. Rodan presided, although he stated clearly in the 1943 article that the Chatham House model relied on international trade, capital movements, and a mixed economy and was therefore substantially different from the Soviet model" (Avramovic, 1984, p. 224). In 1941, Chatham House, a prominent London-based international relations think tank, offered Rosenstein-Rodan the position of Secretary of the institution's Economic Group (ALACEVICH, 2021). There, he collaborated on international relations research aimed at assisting the British government in the increasingly challenging task of maintaining peace on the European continent.

dynamic theory of choice, the possibility of non-existence of equilibrium, and the passage to equilibrium. From this point of view, the 1943 article may be considered a development of these previous works insofar as, in the perspective of Chakravarty (1983), the underlying issue of the text concerns the existence of perfect futures markets for any goods, considering the uncertain and open-ended future.[28]

In fact, Rosenstein-Rodan (1984) himself acknowledges that his interest in the analysis of development had its roots in the moment he became interested in the themes of complementarity, the hierarchical structure of desires, and the role of time. In his words:

> The dynamics of wants and their interrelatedness were much more important to me than the neoclassical attempt at precise characterization of the properties of the utility function. Consumption complementarities, the role of time, the pursuit curve (the dynamic path toward equilibrium), plus external economies-all these dynamic factors were not to be considered as a second order of smalls, but even more as pervasive in a less developed country (ROSENSTEIN-RODAN, 1984, p. 223).

4. THE DEPARTURE FROM VIENNA

Since the mid-nineteenth century, with the revision of policies restricting migration and the civil liberties of some minorities, Vienna had become a city in which Jews from different parts of the Habsburg domains could find fertile ground to plant their roots (ROZENBLIT, 1984, chap. 2; HÜLSMANN, 2007, chap. 2). The city was a symbol not only of the integration of Jews to German culture (Vienna became the European city with the highest rate of conversion from Judaism to Christianity), but also of its ability to engage in activities linked to the cultural vanguard (ROZENBLIT, 1984, chap. 1). Vienna had "the motivation of the Jewish upstart who for the first time ever had the opportunity to integrate himself into a cosmopolitan society" (HÜLSMANN, 2007, p. 28) through activities such as commerce, the press, literature, theater, music, and the sciences. With better access to schools and other infrastructure, these families would constitute the essence of a new society, much more progressive and liberal than the one they left behind in their conservative villages (HÜLSMANN, 2007, p. 28-30).

However, the dissolution of the great Habsburg empire would mean that Vienna, until then a city with a thriving cultural life, would become the capital of a small impoverished republic, plagued by problems such as famine, epidemics,

---

[28] Silva (2005) takes a similar approach, stating that "[i]n [Rosenstein-Rodan's] studies on pure economic theory, investigations emerge regarding concepts such as complementarity in consumption and production, economies of scale, and the role of time in economic adjustments. It was precisely through exploring this last concept that Rosenstein-Rodan became interested in issues related to economic development" (SILVA, 2005, p. 8, our translation).

inflation, and growing tensions between the rural and the urban populations (LEONARD, 1998, p. 6). This unfortunate state of affairs and its subsequent aggravation had consequences on the academic community and scientific production as a whole, soon leading to an intense emigration process of scientists and intellectuals. In this section, we briefly discuss this subject to understand Rosenstein-Rodan's experience within this context.

Despite the ability of Jews to integrate into Viennese society, since the end of the 19th century violent outbreaks occasionally erupted as racist, nationalist, and classist sentiments intensified within Austrian society (ROZENBLIT, 1984, p. 1). Regarding the late 1920s, Leonard (1998) speaks of the escalation of anti-Semitic rhetoric, orchestrated above all by Nazi groups against Jewish businesses and clubs. At the University of Vienna, growing protests against the large presence of Jews among teachers and students escalated and clashes became increasingly frequent (LEONARD, 1998).

The First World War had barely begun and the Jews of the Austro-Hungarian Empire were already suffering its consequences. The Russian attack on Galicia in 1914 (a region that belonged to the Austro-Hungarian Empire and is now part of Poland and Ukraine) forced thousands of Jews to seek refuge in Vienna. From then on, the previously prevailing atmosphere of receptivity in the city began to decline. Rozenblit indicates that this new wave of immigrants had very little in common with the immigrants who had settled in the city over the previous decades, particularly because it comprised a more conservative, religious community that was aware of its identity (ROZENBLIT, 1984, chaps. 1 and 2).

As Alacevich (2021) puts it, even before the annexation of Austria by Germany in 1938, anti-Semitism had reached alarming levels, especially in the late 1920s. Even earlier, in 1920, there was the proposal, not approved at the time, from the Anti-Semitic League to exclude all Jewish public servants in Austria and to impose limits on the number of Jewish students and professors (CRAVER, 1986, p. 23).

Among economists, the most famous case of anti-Semitism may be Mises's experience. Numerous reports affirm that Mises endured tribulations in his academic career due to his Jewish origins. According to Craver, students of Mises in Vienna reached a "remarkable accord" (CRAVER, 1986, p. 5) that Mises was unsuccessful in his attempts to be a tenured professor because he was liberal (in a period when classical liberalism was considered outdated), a Jew "in a society that had rigid social requirements for the integration of Jews, and less and less place for them" (CRAVER, 1986, p. 5), and for being a difficult person.[29]

Other younger economists from Rosenstein-Rodan's generation endured similar situations. As reported by Craver (1986), Fritz Machlup was not granted Ha-

[29] According to Hülsmann (2007, p. 287-288), Mises became a *professor extraordinarius*, no longer an unpaid private lecturer, in May 1918. This means that he acquired tenure but still did not receive monetary compensation.

bilitation – the possibility of teaching, an essential step in the career of a scholar.[30] In the case of Machlup, it remained pending, while others, such as Hayek and Haberler, obtained the degree. As Klausinger (2014) explains, in order to gain Habilitation the candidate had to obtain the support of two professors, whose opinions would be then evaluated by the teaching council. As for Mayer, Machlup credited this obstacle to his jealousy of Mises and his pupils. However, two other professors, Spann and Degenfeld, allegedly prevented him from obtaining the Habilitation due to anti-Semitism. In an interview with Craver, Machlup reports Spann's words as follows:[31]

> "[Y]ou cannot expect me to vote for you with my beliefs." He meant his antisemitism; it was a very official position of his, that he could not vote for a Jew. "But I respect you and I have made an arrangement with Professor Mises" (there was some logrolling) "that I would leave the room before it came to a vote" (CRAVER, 1986, p. 31).

Machlup recalls Degenfeld's words as follows:

> "There's another reason why I cannot vote for you. The Jews are precocious. With this precociousness they appear much brighter at an earlier age. If we then pick the Jew who shows promise at an earlier age, we would really be discriminating against the Aryans, the non-Jews. And, hence, I cannot vote for a young Jew" (CRAVER, 1986, p. 31).

Spann had already played a similar role by creating obstacles to the Habilitation of Franz Xaver Weiss, before leading a smear campaign against him, as shown by Klausinger (2014). Weiss, who was Jewish, had been a disciple of Böhm-Bawerk, and later became Mayer's assistant in editing the *Zeitschrift für Volkswirtschaft und Sozialpolitik*.[32] Spann managed to delay Weiss' Habilitation for four years by opposing its approval.

Morgenstern also faced problems due to Spann's anti-Semitism, even though he was not Jewish. Klausinger (2014) says that Spann was an evaluator of Morgenstern's application. Spann was against it (possibly because he associated Morgenstern with Mayer, after having been closer to Spann himself until 1925), but he refused to write the proper report. When a substitute was appointed (Degenfeld, who approved Morgenstern), Spann denounced Morgenstern for plagiarism. This

---

[30] "In the Austrian university system the habilitation, i.e. the acquisition of a lectureship, played a key role for the academic career of young researchers as it constituted as a rule an indispensable requirement for the appointment to a chair" (KLAUSINGER, 2014, p. 3).

[31] Klausinger (2014) details Spann's anti-Semitism and his rivalry with Mayer.

[32] According to Klausinger (2014), the *Zeitschrift für Volkswirtschaft und Sozialpolitik* had existed from 1921 to 1927. It was the predecessor of the *Zeitschrift für Nationalökonomie*, which was first published in 1929.

caused the Morgenstern process to be delayed for a year. Meanwhile, Spann spread the rumor that Morgenstern was Jewish and a Freemason, in an ultimately unsuccessful effort to convince the bureaucracy not to favor Morgenstern.

In this environment, it is hard to fathom that Rosenstein-Rodan foresaw an optimistic scenario for his academic career. Klausinger (2014) recounts that in the mid-1920s the Faculty of Law at the University of Vienna elected Joseph Hupka, who was Jewish, as its dean. This was followed by a strong backlash, especially from the far-right press and student body. Mayer came to Hupka's defense, rallying support among the college faculty. Furthermore, Mayer himself was elected dean in the following period in opposition to a candidate from the German nationalist wing. All of this ultimately made him the target of a smear campaign. Rosenstein-Rodan, who was Mayer's assistant, likewise became one of the objects of far-right virulence.

Furthermore, Rosenstein-Rodan, like Morgenstern, Machlup and Weiss, suffered anti-Semitic persecution from Spann.[33] Klausinger (2014) states that Rosenstein-Rodan's thesis was rated excellent in Mayer's opinion and just sufficient by Spann, the two members of the evaluation committee. The paper on Marginal Utility, from 1927, was widely praised as a great contribution to economic theory, the only exception being an offensive critique written by Spann.

Faced with this scenario, and aware of the situation endured by Morgenstern and Weiss, in addition to the lack of prospects of being able to maintain himself as an academic, Rosenstein-Rodan decided to leave Vienna. Possibly between the final days of 1929 and early 1930 (as explained in the introduction to this article), he left for Italy. There he was received by Luigi Einaudi, the future president of Italy, a liberal economist who acted as representative in the country of the Rockefeller Foundation – which had already been one of the supporters of the founding of the Austrian Institute for the Study of Economic Cycles by Mises a few years earlier (HÜLSMANN, 2007, p. 566). Einaudi served as a sort of tutor for Rosenstein-Rodan (ALACEVICH, 2021), who was a fellow of the mentioned foundation until moving to England in 1931 (EßLINGER, 1999), where he would settle for the next few years. Despite being in London, Rosenstein-Rodan remained the editor of the *Zeitschrift für Nationalökonomie* until 1934, which afforded him a continued association with the University of Vienna several years after he had left Austria (EßLINGER, 1999).

[33] Hayek and Haberler, also under Mayer's protection, likewise suffered an ultimately successful opposition from Spann to their Habilitations, albeit without a direct anti-Semitic sentiment (KLAUSINGER, 2014). In Klausinger's words, mentioning an author of the time, "Spann could identify the liberal Austrian school as an outcome of the Jewish spirit, that is, as being un-German (…), disregarding the ethnicity of its concrete members" (KLAUSINGER, 2014, p. 196).

5. FINAL CONSIDERATIONS

The present work sought to reconstruct the trajectory of Paul Narciz Rosenstein-Rodan from the beginning of his career until his departure from Austria. By looking into some of the fundamental elements of the city's academic life during that time, we sought to characterize the research and learning environment in which the author lived for about ten years, his main seminars, professors, and study themes. We also addressed the works he produced during this first phase of his career, and some theoretical developments with which he collaborated. Finally, we explored the deterioration of scientific activity in the city and the emigration of its academics amidst the alarming rise of Nazism.

Following a path similar to his peers, Rosenstein-Rodan was trained in a decentralized and relatively informal academic environment, interacted with some of the leading minds of the Austrian economic school of thought, and witnessed some of its greatest accomplishments. On the other hand, he also endured the intensification of ethnic and political tensions, experienced a number of major rivalries at the university of Vienna, and witnessed the unfolding conflicts in Europe.

During his formative period in Vienna, Rosenstein-Rodan engaged in various debates, especially on pure economic theory, in vogue not only within the Austrian School but also among researchers based outside Austria. His early research may be seen as a reflection of the discussions to which the then young economist encountered in Vienna.

One of the few regular participants in different groups (Mayer's, Mises', and NOeG's), Rosenstein-Rodan was certainly capable of discerning the different perspectives in economic theory. Undoubtedly one of the most brilliant young men of his time (or otherwise he would not have been invited by Mises to his circle, nor would he have been the most frequent author at the NOeG meetings between 1927 and 1929), Rosenstein-Rodan was forced to leave Vienna in the face of the intensifying anti-Semitism and the obstacles to academic and professional progress, as he had already witnessed in the experience of his peers. Following his departure from Vienna, he began to further devote his research interests to more applied themes. His contributions to development theory may be better appreciated once we have a better understanding of his early trajectory in Vienna, under the influence of the Austrian School.

6. REFERENCES

ALACEVICH, Michele. Paul Rosenstein-Rodan and the Birth of Development Economics. History of Political Economy, v. 53, n. 5, p. 857–892, 2021.

AVRAMOVIC, Dragoslav. Comment. In: MEIER, Gerald; SEERS, Dudley (Ed.) Pioneers in Development. Washington: Oxford University Press, 1984.

BLAUG, Mark. Economic theory in retrospect. Cambridge: Cambridge University Press, 1985.

BOEHM, Stephan. Austrian Economics Between the Wars: Some Historiographical Problems. In:

CALDWELL, Bruce; BOEHM, Stephan (Ed.) Austrian economics: tensions and new directions. New York: Springer Science+Business Media, 1992.

BOETTKE, Peter J.; COYNE, Christopher J.; NEWMAN, Patrick. The history of a tradition: Austrian economics from 1871 to 2016. Research in the History of Economic Thought and Methodology, v. 34A, p. 199-243, 2016.

CARDOSO, Fernanda. Nove Clássicos do Desenvolvimento Econômico. Jundiaí: Paco, 2018.

CARVALHO, André Roncaglia de. Equilíbrio, coordenação e conhecimento: um estudo sobre a questão monetária em Hayek. Pontifícia Universidade Católica de São Paulo (Master's thesis), 2007. Available at https://repositorio.pucsp.br/jspui/handle/handle/9304

CHAKRAVARTY, Sukhamoy. Paul Rosenstein-Rodan: An Appreciation. World Development, v. 11, n. 1, p. 73-75, 1983.

CRAVER, Earlene. The emigration of the Austrian economists. History of Political Economy, v. 18, n. 1, p. 1-32, 1986.

DEKKER, Erwin. The Vienna circles: cultivating economic knowledge outside academia. Erasmus Journal for Philosophy and Economics, v. 7, n. 2, p. 30-53, 2014.

EßLINGER, Hans Ulrich. Rosenstein-Rodan, Paul Narziß. In: HAGEMANN, Harald; KROHN, Claus-Dieter. Biographisches Handbuch der deutschsprachigen wirtschaftswissenschaftlichen Emigration nach 1933. München: Saur, 1999.

GREAVES JR, Percy L. Introduction. 1977. In MISES, Ludwig von, 2006.

HABERLER, Gottfried. Mises' Private Seminar. 1961. In MISES, Ludwig von. Planning for Freedom and twelve other essays and addresses: Memorial Edition. South Holland: Libertarian Press, 1974.

HAGEMANN, Harald. The Austrian School in the Interwar Period. In: HAGEMANN, Harald; NISHIZAWA, Tamotsu; IKEDA, Yukihiro. Austrian Economics in Transition. London: Palgrave Macmillan, 2010.

HAYEK Friedrich A. Economics and Knowledge. Economica, v. 4, n. 13, p. 33-54, 1937.

HIGH, Jack; BLOCH, Howard. On the history of ordinal utility theory: 1900-1932. History of Political Economy, v. 21, n. 2, p. 351-365, 1989.

HOSSEINI, Hamid. Rosenstein-Rodan: From marginal utility to a pioneer in economic development and possibly socio-economics. The Journal of Socio-Economics, v. 28, n. 2, p. 117-118, 1999.

HÜLSMANN, Jörg Guido. Mises: The last knight of liberalism. Auburn: Ludwig von Mises Institute, 2007.

KAUDER, Emil. A History of Marginal Utility Theory. Princeton: Princeton University Press, 1965.

KIRZNER, Israel. The Austrian School of Economics, 1987. In: KIRZNER, Israel. The meaning of market process: essays in the development of modern Austrian economics. London: Routledge, 1992.

KLAUSINGER, Hansjörg. From Mises to Morgenstern: Austrian Economics During the Ständestaat. Quarterly Journal of Austrian Economics, v. 9, n. 3, p. 25-43, 2006.

KLAUSINGER, Hansjörg. Academic Anti-Semitism and the Austrian School: Vienna, 1918–1945. Atlantic Economic Journal, v. 42, p. 191–204, 2014.

KLAUSINGER, Hansjörg. Hans Mayer, last knight of the Austrian school, Vienna branch. History of Political Economy, v. 47, n. 2, p. 271-305, 2015.

KLAUSINGER, Hansjörg. The Nationalökonomische Gesellschaft (Austrian Economic Association) in the Interwar Period and beyond. Research in the History of Economic Thought and Methodology, v. 34A, p. 9-43, 2016.

KURRILD-KLITGAARD, Peter. The viennese connection: Alfred Schutz and the Austrian school. The Quarterly Journal of Austrian Economics, v. 6, n. 2, p. 35–67, 2003.

LEEN, Auke R. Marginal Utility: Short-cut in equilibrium and disequilibrium. In: Congresbijdrage Eur. Conf. Austrian economics. Maastricht. 1992.

LEONARD, Robert J. Ethics and the excluded middle: Karl Menger and social science in interwar Vienna. Isis, v. 89, n. 1, p. 1-26, 1998.

MISES, Ludwig von. Monetary stabilization and cyclical policy. In: MISES, Ludwig von, 2006.

MISES, Ludwig von. The Causes of the Economic Crisis, and Other Essays Before and After the Great Depression. Auburn: Ludwig von Mises Institute, 2006.
MISES, Ludwig von. A Critique of Interventionism. Auburn: Ludwig von Mises Institute, 2011.
MISES, Ludwig. Notes and Recollections: With The Historical Setting of the Austrian School of Economics. Indianapolis, Liberty Fund, 2013.
MISES, Margit von. My years with Ludwig von Mises. New Rochelle: Arlington House, 1976.
MOSCATI, Ivan. How cardinal utility entered economic analysis: 1909–1944. The European Journal of the History of Economic Thought, v. 20, n. 6, p. 906-939, 2013.
ROSENSTEIN-RODAN, Paul N. Grenznutzen. In: Handwörterbuch der Staatswissenschaffen, 4a. edição, vol. 4, p. 1190-1223.
ROSENSTEIN-RODAN, Paul N. Das Zeitmoment in der mathematischen Theorie des Wirtschaftlichen Gleichgewichtes. Zeitschrift für Nationalökonomie 1(1): 129-142, 1929.
ROSENSTEIN-RODAN, Paul N. The role of time in economic theory. Economica, v. 1, n. 1, p. 77-97, 1934.
ROSENSTEIN-RODAN, Paul N. The coordination of the general theories of money and price. Economica, v. 3, n. 11, p. 257-280, 1936.
ROSENSTEIN-RODAN, Paul N. Problems of industrialisation of eastern and south-eastern Europe. The economic journal, v. 53, n. 210/211, p. 202-211, 1943.
ROSENSTEIN-RODAN, Paul N. Natura Facit Saltum: Analysis of the Disequilibrium Growth Process. In: MEIER, Gerald; SEERS, Dudley (Ed.) Pioneers in Development. Washington: Oxford University Press, 1984.
ROZENBLIT, Marsha L. The Jews of Vienna, 1867-1914: assimilation and identity. Albany: State University of New York Press, 1984.
SCHULAK, Eugen Maria; UNTERKÖFLER, Herbert. The Austrian School of Economics: A History of Its Ideas, Ambassadors, and Institutions. Auburn: Ludwig von Mises Institute, 2011.
SCHUMPETER, Joseph A. History of economic analysis. London: Routledge, 2006.
SILVA, Danilo Freitas Ramalho da. A construção do objeto teórico das teorias do Desenvolvimento Econômico. Dissertação de Mestrado. Universidade de São Paulo. 2005. Available at https://www.teses.usp.br/teses/disponiveis/12/12140/tde-13022006-161222/pt-br.php
THE NEW YORK TIMES. Paul Rosenstein-Rodan Dies; Noted Adviser on Economics. The New York Times, New York, 30 abr. 1985. Seção A. Página 26. Available at https://www.nytimes.com/1985/04/30/us/paul-rosenstein-rodan-dies-noted-adviser-on-economics.html. 1985. Access January 16th, 2024.
TIMMS, Edward. Cultural parameters between the wars: a reassessment of the Vienna circles. In: HOLMES, Deborah; SILVERMAN, Lisa (Ed.). Interwar Vienna: culture between tradition and modernity. Rochester, Camden House, p. 21-30, 2009.
VAUGHN, Karen. Austrian Economics in America: The Migration of a Tradition. Cambridge: Cambridge University Press, 1994.
WRIGHT, Claire. The 1920s Viennese Intellectual Community as a Center for Ideas Exchange: A Network Analysis. History of Political Economy, v. 48, n. 4, p. 593–634, 2016.

Data Availability Statement: The research data is available in a repository.
Editor responsible for the evaluation process: Luiz Carlos Bresser-Pereira