

Systematic literature review on the decomposition of retirement pathways

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Abstract

Purpose – This systematic literature review maps and critically synthesises the fragmented research on the decomposition of retirement pathways. It aims to clarify concepts, compare methodological approaches and establish a foundation for understanding retirement as a de-standardised, multi-phase transition.

Design/methodology/approach – Following PRISMA guidelines, we systematically searched Web of Science, Scopus and EBSCO databases, identifying 602 publications. After a two-stage screening, 32 core studies were selected for in-depth analysis to trace definitions, methods and typologies of retirement pathways.

Findings – Scholarly interest increased markedly post-2010, reflecting diversified retirement patterns. Research predominantly uses longitudinal methods (sequence analysis, latent class models) to identify pathways like gradual retirement, bridge employment, unretirement and involuntary exits. However, the field suffers from conceptual fragmentation, inconsistent terminology and a lack of standardised definitions, impeding comparability.

Research limitations/implications – The review is limited to English-language, peer-reviewed articles. The geographic imbalance of the evidence base and a disproportionate reliance on US-based research with an underrepresentation of the most rapidly ageing countries stems from the availability of data sets. Future research must develop standardised definitions and adopt comparative, mixed methods designs to explore how institutional contexts shape retirement trajectories.

Practical implications – Policymakers and practitioners should use the identified typology to reform pension systems, eliminate disincentives for prolonged work and create tailored pre-retirement counselling and age-friendly workplace practices that support flexible exits.

Social implications – The destandardisation of retirement is a societal shift with equity implications. Social policy must adapt to prevent new inequalities in access to desirable pathways and ensure well-being across diverse social groups in ageing societies.

Originality/value – This is the first systematic review focused explicitly on the conceptual and methodological underpinnings of retirement pathway decomposition. By systematically disentangling the inconsistent terminology, heterogeneous definitions and diverse identification strategies (including confirmatory vs. exploratory approaches) prevalent in the literature, the review offers a structured integrative synthesis that organises existing conceptual and methodological approaches to retirement pathways. This framework bridges life-course sociology and social policy analysis, providing much-needed conceptual clarity for researchers and a structured evidence base for policymakers.

Keywords Retirement pathways, Systematic literature review, De-standardisation, Labour market exit, Social policy, Ageing

Paper type Literature review

Introduction

Since the first pension system provided by the state was introduced in Germany at the end of the 19th century and then similar systems were implemented in other Western countries (Thane, 2009), retirement decisions and the process of exiting labour market have changed



significantly. The first solutions combined the risks of disability and old age, linking the elderly with inability to work. Traditionally, workers who reached retirement age left the labour market and started obtaining pension benefits. This perspective reflects the classical life-cycle hypothesis (Ando and Modigliani, 1963), which assumes a clear and irreversible transition from the accumulation of resources during the working phase to their decumulation after retirement. Such an approach corresponds to the historically dominant, standardised model of retirement. Later, however, the nature of retirement evolved, giving rise to a variety of concepts, models and schemes (Beehr and Bowling, 2013; Denton and Spencer, 2009). This was due to radical institutional, organisational and family-related transformations (Henkens and Solinge, 2021).

The nature of retirement process is changing in terms of both timing (schedule) and design (pattern). Previously, it was a simple switch from employment to non-employment at the moment of meeting the eligibility criteria (Blöndal and Scarpetta, 1999). Metaphorically, it can be compared to a guillotine that rapidly and definitely cuts workers out of the labour market. Nevertheless, retirement is no longer regarded as a discrete (one-off) event. Recently, it has become more diverse and individualised (Szinovacz, 2003; Wang and Shultz, 2010). The one normative order is being replaced by many new (atypical) forms of workforce withdrawal (Calvo *et al.*, 2018). This is an expression of the general change in the life cycle, where transitions from one stage of life to another are becoming increasingly decomposed. Variations that were once considered disorderly are now becoming the new norm. The transition from working stage to post-working stage is no exception. As a result, according to Leinonen *et al.* (2022, p. 1631), retirement is now perceived as a *highly complex phenomenon that may be multifaceted, multiphased, and even multidirectional*.

These developments underscore not only the increasing complexity of later-life transitions but also a central conceptual challenge for contemporary research: the growing destandardisation of retirement pathways. While numerous studies investigate specific components of labour market exit (such as timing, institutional incentives, individual decision-making, or socio-economic determinants), there remains limited conceptual clarity regarding the retirement process as a sequence of interconnected transitions rather than a singular event. This gap highlights the need to treat the decomposition of retirement pathways as a distinct analytical category, one that captures the multidimensional, extended, and potentially reversible character of workforce withdrawal - features that traditional, one-step models of retirement can no longer adequately explain.

In the literature, decomposition of a retirement process is described as a transformation from “crisp” to “blurred” (Mutchler *et al.*, 1997) or from “abrupt” to “smooth” (Henkens and Solinge, 2021). Under the “blurred”/“smooth” approach a retirement process is a sequence of various transitions. A retiring person may withdraw workforce in many different manners, including phased retirement, bridge employment, second/third careers, and re-entry after a non-working period (Cahill *et al.*, 2015; Lassen and Vrangbæk, 2021; Mazumdar *et al.*, 2024; Mutchler *et al.*, 1997; Phillipson, 2019; Thang, 2021). Routes are diverse: gradual role changes, repeated moves in and out of the workforce, or even overlapping roles of worker and retiree. Thus, the retirement process reveals as a continuum between full-time career employment and complete withdrawal from the labour force (Cahill *et al.*, 2015), with diverse trajectories from one end to the other.

Several terms are used to describe the dynamics of labour market exit, including pathways, trajectories, transitions, routes, and processes. These concepts are often used interchangeably, which contributes to conceptual ambiguity. In this review, we use the term *retirement pathways* as an umbrella concept referring to sequences of labour-market states during the transition from work to retirement. Furthermore, the term *decomposition* refers to the analytical disaggregation of the work-to-retirement transition into empirically identifiable sequences of labour-market states over time.

To date, various research approaches have been applied to describe retirement pathways. These studies differ in their objectives, definitions, and research methods, resulting in a broad

spectrum of results that are often difficult to compare. To support further research in this field and reduce conceptual ambiguity, this article aims to clarify key concepts and to identify and consolidate the current state of knowledge on retirement pathways. Drawing on a systematic literature review, we assess the size of the publication base, trace its development over time, and – most importantly - compare its main findings.

The subject is important and up-to-date from both a theoretical (research) and a practical (policy-making) perspective. It reflects the changing relationship between ageing and work. There is a growing need to recognise the potential for extending individuals' participation in the labour market, as workforce withdrawal becomes increasingly fragmented and decomposed. According to Phillipson (2019, p. 629) *these developments indicate both the challenge of conceptualising new forms of work-ending, and – in policy terms – the extent to which these can successfully accommodate longer working lives.*

The primary aim of this paper is to provide a comprehensive synthesis of existing research on the decomposition of retirement pathways and to clarify the conceptual and methodological foundations of this field. By conducting a systematic literature review, the study seeks to identify how retirement pathways have been defined, measured, and categorised across different theoretical and empirical contexts. Furthermore, it aims to capture the main trends, typologies, and analytical approaches used in literature, while highlighting persisting ambiguities and research gaps.

What this review adds to the literature is a structured conceptual and methodological synthesis that integrates terminology, definitions, and analytical approaches to retirement pathways. Rather than proposing a fully specified analytical model, the paper organises existing strands of research into a coherent framework for analysing retirement as a decomposed, multi-phase transition. Its originality lies in three interconnected dimensions. First, it clarifies the terminology used to describe retirement dynamics, which is often used interchangeably in the literature. Second, it compares how retirement is operationalised across studies, distinguishing between objective, subjective, and mixed definitions. Third, it maps the dominant methodological strategies used to identify retirement pathways, highlighting how conceptual definitions shape empirical identification methods. By integrating these three dimensions, the paper provides a structured framework for analysing retirement as a decomposed, multi-phase transition.

The article is structured as follows: The introduction outlines the background to and rationale for the study. The next section presents the method and research procedure, including the literature search strategy and selection criteria. This is followed by a presentation of the results, focusing on the definitions, typologies and methodological approaches identified in the reviewed studies. The subsequent section discusses the key findings, highlights conceptual ambiguities and proposes a working definition of decomposition of retirement pathways. The article concludes with a discussion of the study's limitations, directions for further research, and policy implications.

Method and research procedure

There are many types of systematic literature reviews, applied depending on the purpose and research questions adopted (Paul and Criado, 2020). For our study, the most appropriate type was domain-based, structured review, because we were particularly interested in specific constructs (retirement pathways) and methods of their identification.

Before proceeding to the implementation phase of our literature review, we formulated 3 primary research questions:

- (1) How has the volume of scientific publications on retirement pathways evolved over time?
- (2) What retirement pathways are highlighted in the research?

(3) How are they identified?

Then we conducted a search of the peer-reviewed academic literature on retirement pathways published until March 19, 2024, which was the day of our database inquiry. The selection procedure referred to the PRISMA scheme (Moher *et al.*, 2010) and is illustrated in Figure 1.

The search was conducted in databases commonly used in literature reviews within the economic sciences: Web of Science, Scopus, and EBSCO (Cwiklicki and Wojnarowska, 2020; Vermiglio *et al.*, 2022). We decided to limit the inquiry to articles only, as they are widely recognised as the most reliable source of the latest scientific knowledge. Since there are many synonymous expressions in the literature, we looked for one of the following phrases (in both forms, singular and plural): *retirement path(s)*, *retirement pathway(s)*, *retirement transition(s)*, *retirement trajectory(ies)*, *retirement process(es)*. The search was conducted among titles, abstracts and keywords in order to identify articles whose content is most relevant to the topic of interest.

Our search identified 478 articles in Web of Science, 491 in Scopus, and 329 in EBSCO. After removing duplicates, we obtained 595 articles that met all search criteria across the three databases. The first adequate scientific publication on retirement pathways appeared in 1952, so we set this year as the beginning date for selecting articles. As illustrated in the Figure 2 the academic output in this field developed slowly during the first decades, with only occasional publications until the 1980s. From the late 1990s onwards the literature expanded more visibly, followed by a pronounced increase after 2010, reflecting the growing relevance of retirement trajectories as a subject of empirical and theoretical inquiry.

In addition to the articles retrieved from the three databases, we included seven further publications identified through expert judgement by the research team, resulting in a final set of 602 texts for analysis. While systematic reviews require strict adherence to transparent and replicable search procedures, such procedures inevitably narrow the field of vision and may overlook influential or under-indexed contributions. For this reason, we deliberately supplemented the database results with a small number of selectively and subjectively chosen publications that, in our view, may be of key relevance to the analysed problem. The following criterion was applied when selecting these additional articles: being experienced

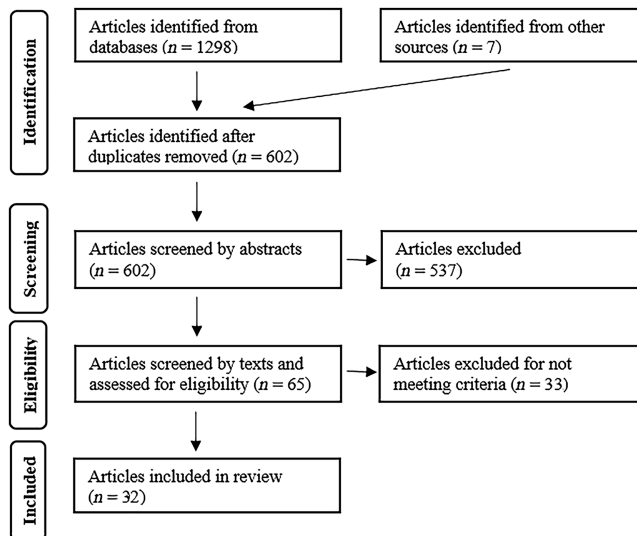


Figure 1. Procedure of selecting articles for analysis. Source: Authors' own work

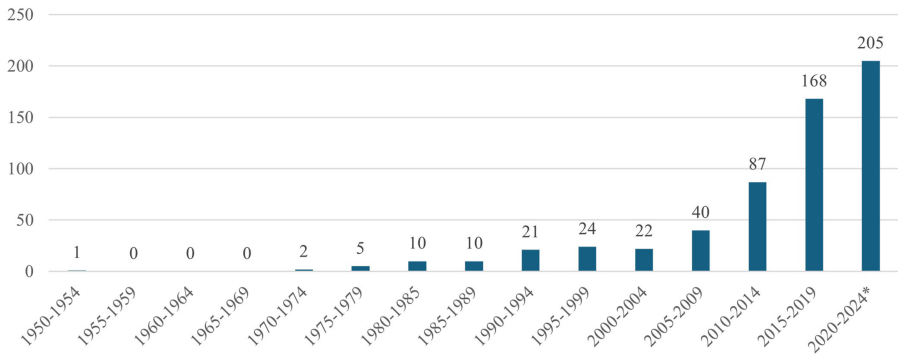


Figure 2. Articles on retirement pathways identified in accordance with the systematic search procedure ($n = 595$). * The year 2024 includes only publications indexed in the databases up to the date of our search (19 March 2024). Source: Authors' own work

researchers in the field of pensions and social policy, all authors identified articles known to them which did not appear in the search results from the databases but met the other criteria of the selection procedure. A decision on whether to include them in the study was then taken collectively.

The literature selection process consisted of two stages. Initially, the relevance of each article was assessed based on abstract screening against the following eligibility criteria:

- (1) containing a description of the process of transition from labour force participation to retirement;
- (2) being either theoretical (determining retirement paths *a priori*) or empirical (based on statistical data);
- (3) concerning entire populations or large social and occupational groups. Consequently, small-scale qualitative studies, case studies, or analyses restricted to narrowly defined occupational samples were excluded, as they do not allow the identification of generalisable retirement pathway patterns comparable across studies.

For the second stage of selection 65 texts (58 from searches in bibliographic databases and 7 from other sources) were qualified. This time, the full content of the articles was analysed to verify its compliance with the adopted criteria. As a result, we selected 32 articles for our review, which were then analysed to answer our research questions.

During the study, we took multiple measures to avoid systematic bias, including selection bias resulting from inadequate source selection (Booth *et al.*, 2012). These included the application of the PRISMA model, the use of three alternative databases and limiting the texts analysed to peer-reviewed articles. Furthermore, during the second stage of selection, all four members of the research team were involved in deciding whether each text should be accepted for further analysis. The final decision was therefore made collectively.

Moreover, each of the 32 reviewed studies was coded according to whether it identified or analysed specific categories of retirement pathways (e.g. gradual retirement, bridge employment, crisp/full retirement, unretirement, involuntary exits, or joint trajectories). Based on this coding, we calculated the frequency with which each pathway type appeared across the reviewed studies and linked these patterns to the datasets and institutional contexts in which they were analysed. This procedure enabled a more systematic assessment of the relative salience of different retirement pathways in the literature.

It should be noted that the inclusion criteria applied during the selection process were intended to ensure the conceptual relevance and comparability of the reviewed studies rather

than to serve as a formal methodological quality appraisal or risk-of-bias assessment. This is consistent with the aim of the review, which focuses on mapping and synthesising concepts, definitions, and methodological approaches to retirement pathways rather than evaluating interventions, estimating effect sizes, or establishing causal relationships.

Results

Following the multi-stage selection procedure, 32 articles were qualified for the final in-depth analysis. For clarity, these studies are referred to in the subsequent text by their assigned item number (1–32), in accordance with [Table 1](#).

The purpose of the articles examined was to analyse the transition process from work to retirement, aiming to identify and categorise distinct exit routes or patterns within this process. In addition to mapping these trajectories, several studies also explored the consequences of different retirement modes. For instance, some examined the impact of retirement pathways on subjective well-being or economic well-being after retirement (items 32, 31), while others focused on financial adequacy and insecurity (items 19, 28). Furthermore, items 7 and 1 addressed behavioural aspects of retirement, comparing individuals' intentions regarding retirement modes with their actual retirement behaviour.

Key elements and definitions of the retirement process

A key issue in the analysed papers concerns whether the definition of retirement is based on objective criteria, subjective criteria, or a combination of both. Objective definitions, grounded in employment status, conceptualise retirement as a form of withdrawal from the labour market. In the strictest sense, retirement is defined as complete labour force withdrawal (items 11, 19, 22). Alternatively, retirement status may be determined by the number of working hours or by earnings; for instance, part-time employment can be regarded as partial retirement (items 1, 19, 26). In studies involving couples, employment status is often categorised as full-time work (FT), partial retirement (PR, 0–34 h per week), and full retirement (RT, 0 h per week) – item 21. Subjective definitions, in contrast, rely on respondents' self-assessment of whether they consider themselves retired (item 8, 32). The main limitation of this approach lies in its ambiguity, as individuals may interpret the notion of “retirement” differently depending on personal, cultural, or contextual factors. Finally, combined definitions, which are preferred in some analyses, merge objective and subjective criteria -for example, by linking the absence of earned income from work with the respondent's self-identification as being retired (item 1, 19). Taken together, the reviewed literature suggests that definitions of retirement can be broadly grouped into three analytical approaches: objective definitions based on labour market status or income from work, subjective definitions based on individuals' self-identification as retired, and combined definitions integrating both criteria. Although these approaches differ in operationalisation, they represent the main conceptual strategies used to define retirement across the analysed studies. This typological distinction helps to systematise the otherwise fragmented terminology observed in the literature.

The analysed papers also employ varied terminology for the paths and their components. The transition process from work to retirement is referred to as a pathway (items 2, 7, 8, 15, 18, 22, 25, 32), a path (items 1, 20, 21, 26, 29), a trajectory (items 2, 5, 6, 13, 14, 16, 17, 21, 24, 25, 27) or a route (items 23, 31, 32). The typology encompasses linear and one-directional processes of going from work to retirement and non-linear ones that include also coming back to work from retirement and a choice range available at any analysed time. A pathway or a path usually means a linear attitude, meaning starting from full work and ending at full retirement with few intermediate states along the way. A retirement trajectory is described as the sequence of primary income sources within the age bracket during which old-age pension entrance is theoretically possible (items 2, 5, 13, 17, 24), but can also include periods before possible

Table 1. Analysed articles (*n* = 32)

Item	Author(s)	Title	Journal	Year
1	N. Maestas	<i>Back to Work: Expectations and Realizations of Work after Retirement</i>	The Journal of Human Resources	(2010)
2	A.E. Fasang	<i>Retirement: Institutional Pathways and Individual Trajectories in Britain and Germany</i>	Sociological Research Online	(2010)
3	J. Cho, A. Lee	<i>Life Satisfaction of the Aged in the Retirement Process: A Comparative Study of South Korea with Germany and Switzerland</i>	Applied Research in Quality of Life	(2014)
4	S. Grad	<i>Income Change at Retirement</i>	Social Security Bulletin	(1990)
5	A.-J. Riekhoff, N. Järnefelt	<i>Retirement trajectories and income redistribution through the pension system in Finland</i>	Social Forces	(2018)
6	I. Baumann <i>et al.</i>	<i>Health among workers retiring after the state pension age: a longitudinal and comparative study</i>	BMC Geriatrics	(2022)
7	S.-K. Han, P. Moen	<i>Clocking Out: Temporal Patterning of Retirement</i>	American Journal of Sociology	(1999)
8	I. Madero-Cabib <i>et al.</i>	<i>Gendered retirement pathways across lifecourse regimes</i>	Ageing and Society	(2023)
9	M.D. Hayward <i>et al.</i>	<i>The Retirement Process among Older Women in the United States: Changes in the 1970s</i>	Research on Aging	(1988)
10	S. Schmauk	<i>Pathways to retirement in West Germany: Does divorce matter?</i>	Advances in Life Course Research	(2024)
11	K.E. Cahill <i>et al.</i>	<i>Is Bridge Job Activity Overstated?</i>	Work, Aging and Retirement	(2018)
12	J.C. Henretta	<i>Changing Perspectives on Retirement</i>	Journal of Gerontology	(1997)
13	A.J. Riekhoff, N. Järnefelt	<i>Gender differences in retirement in a welfare state with high female labor market participation and competing exit pathways</i>	European Sociological Review	(2017)
14	S.B. Andrea <i>et al.</i>	<i>Beyond Hours Worked and Dollars Earned: Multidimensional EQ, Retirement Trajectories and Health in Later Life</i>	Work, Aging and Retirement	(2022)
15	P. Hudomiet <i>et al.</i>	<i>Cognitive Ability, Personality, and Pathways to Retirement: An Exploratory Study</i>	Work, Aging and Retirement	(2018)
16	A.J. Riekhoff	<i>Institutional and socio-economic drivers of work-to-retirement trajectories in the Netherlands</i>	Ageing and Society	(2018)
17	A.J. Riekhoff	<i>De-standardization and differentiation of retirement trajectories in the context of extended working lives in the Netherlands</i>	Economic and Industrial Democracy	(2019)

(continued)

Table 1. Continued

Item	Author(s)	Title	Journal	Year
18	J.F. Quinn, M. Kozy	<i>The Role of Bridge Jobs in the Retirement Transition: Gender, Race, and Ethnicity</i>	The Gerontologist	(1996)
19	K.E. Cahill <i>et al.</i>	<i>To What Extent is Gradual Retirement a Product of Financial Necessity?</i>	Work, Aging and Retirement	(2017)
20	K.E. Cahill <i>et al.</i>	<i>Retirement Patterns and the Macroeconomy, 1992–2010: The Prevalence and Determinants of Bridge Jobs, Phased Retirement, and Reentry Among Three Recent Cohorts of Older Americans</i>	The Gerontologist	(2015)
21	K.G. Carman <i>et al.</i>	<i>Pathways to Retirement Among Dual Earning Couples</i>	The Journal of the Economics of Ageing	(2022)
22	D.F. Warner <i>et al.</i>	<i>The Retirement Life Course in America at the Dawn of the Twenty-First Century</i>	Population Research and Policy Review	(2010)
23	A.M. O’Rand	<i>SSS Presidential Address: The Devolution of Risk and the Changing Life Course in the United States</i>	Social Forces	(2011)
24	S. König <i>et al.</i>	<i>Development of healthcare use across contemporary retirement pathways: results from a register-based cohort study</i>	Scandinavian Journal of Public Health	(2022)
25	M. Boissonneault, J. de Beer	<i>Work Ability Trajectories and Retirement Pathways. A Longitudinal Analysis of Older American Workers</i>	Journal of Occupational and Environmental Medicine	(2018)
26	T. Leinonen <i>et al.</i>	<i>A conceptual framework addressing the complex labor market dynamics of the work-to-retirement process</i>	European Journal of Ageing	(2022)
27	I. Baumann, I. Madero-Cabib	<i>Retirement Trajectories in Countries with Flexible Retirement Policies but Different Welfare Regimes</i>	Journal of Aging and Social Policy	(2021)
28	L.G. Platts <i>et al.</i>	<i>Returns to work after retirement: a prospective study of unretirement in the United Kingdom</i>	Ageing and Society	(2019)
29	A. Gustman, T. Steinmeier	<i>Modeling the retirement process for policy evaluation and research</i>	Monthly Labor Review	(1984)
30	A.L. Curl, A.L. Townsend	<i>Retirement transitions among married couples</i>	Journal of Workplace Behavioral Health	(2008)
31	B. Hallerod <i>et al.</i>	<i>Leaving the labor market: the impact of exit routes from employment to retirement on health and wellbeing in old age</i>	European Journal of Ageing	(2013)
32	L.M. Palomäki	<i>Does It Matter How You Retire? Old-Age Retirement Routes and Subjective Economic Well-Being</i>	Social Indicators Research	(2019)

Source(s): Authors’ own work

retirement. Finally, a route is usually described by changes in activity status with a special focus on periods of claiming social benefits (unemployment, disability etc.).

The majority of studies analysed concentrate on the entire transition period, while others examine in detail only one specific stage or change in individuals' lives, such as unretirement (item 28) or bridge pensions (item 11). In some research, retirement trajectories are assessed for both individuals and couples, as joint retirement trajectories (item 21).

Depending on the aim of the research, methodological approach, and available data, the retirement paths are indicated by taking into account fewer or more individuals' statuses in the analysed points in time, ranging from 1 to 12 states analysed. Some analyses indicate no elements but give an overall theoretical background of the retirement process.

These definitional choices are not neutral, as they directly shape the identification of retirement pathways and the comparability of results across studies.

Temporal and spatial dimensions

There were relatively few articles that delineated retirement pathways before 2010. Only 6 such articles were included in the set analysed (items 4, 7, 9, 12, 18 and 29). This means that most studies were published after 2010.

The analyses covered a limited number of countries, mainly the United States - 19 times, followed by: Germany - 6 times, the United Kingdom - 5 times, Sweden - 5 times, Switzerland 3 times, and Chile, Finland, the Netherlands, Austria, Belgium, France, Italy, Spain, Denmark - 2 times, and South Korea - 1 time. The analysed articles usually took into account a single country or a small number of them: 2 countries (items 2, 28), 3 countries (item 3), 4 countries (item 27). Only 3 articles dealt with cross-country analysis: 12 countries (item 6), - 11 countries (item 8) and - 29 countries (item 32).

The geographic imbalance of the evidence base stems from the availability of data sets. This results in a disproportionate reliance on U.S.-based research and an underrepresentation of the countries experiencing the most rapid population ageing (East Asia) as well as countries with mature welfare states and distinct welfare state regimes (Western Europe and the Nordic countries). Such geographic and regime-related imbalance affects analytical outcomes, as retirement pathways are shaped by regime-specific institutional arrangements, including the mandatory or voluntary nature of retirement, statutory retirement ages, access to partial pensions, opportunities to combine pension receipt with employment, and the possibility of suspending benefits in order to re-enter the labour market. Some studies suggest that social-democratic regimes (e.g. Sweden, Denmark) exhibit higher rates of early retirement compared to liberal regimes (e.g. the United States) (Baumann and Madero-Cabib, 2021; Zaccaria, 2009). However, this pattern should be interpreted with caution, as cross-country differences depend strongly on institutional design, eligibility rules, and the operationalisation of retirement transitions used. Some analyses examining standardisation of retirement pathways in Japan (Mizuochi and Raymo, 2025) and Nordic countries (Kuitto and Lee, 2025) have only emerged in recent months, after the article-selection phase for the systematic literature review had already been completed.

Data availability

The relatively short list of countries analysed is related to the limited availability of relevant datasets to determine the pathways of retirement over a certain period of time. The datasets used in the articles analysed were usually survey panel data, with a long data collection period. In a few cases, registry data were reached, but problems in obtaining such data made these analyses infrequent - items 5 and 13 (Finland), item 17 (the Netherlands), and item 10 (West Germany). It is worth noting that in the analyses considering a larger group of countries (items 6, 8) the authors used data from the Survey of Health, Ageing and Retirement in Europe (SHARE), which was supplemented by surveys from the English Longitudinal Study of Ageing (ELSA), the Health and Retirement Survey (HRS), and the Chilean Social Protection

Survey (EPS). The creation of sustainable, standardised surveys such as SHARE (<https://share-eric.eu>), covering an increasing number of countries, opens up opportunities for cross-country comparative analysis. What's more, surveys like SHARE are being created with an eye toward the possibility of combining data with other databases, greatly expanding the field of analysis. An overview of the datasets used in the analysed articles, illustrating their diversity and geographic focus, is provided in [Table 2](#).

For the empirical analyses, a specific birth cohort(s) was usually selected whose behaviour was analysed during the period of retirement. This period varied from study to study, covering a period of several years before and several years after the legal retirement age.

Approaches to identifying retirement pathways

In most cases, the analyses were empirical in nature and based on quantitative research. Only one study (item 26) was purely theoretical, focusing on the conceptualisation of retirement pathways. A single additional study (item 12) can be described as hybrid or descriptive, combining limited conceptual discussion with empirical or narrative elements. The analysed set of papers did not include a text containing qualitative analyses conducted, for example, in the form of in-depth interviews or focus groups. Based on the articles selected for analysis, the approaches to identifying retirement pathways can be categorised into distinct groups, as illustrated in [Figure 3](#).

Table 2. Datasets used in the analysed articles

Country	Datasets
USA	Retirement History Survey (1969, 1971, 1973, 1975); Current Population Survey (CPS for years 1972, 1973, 1980 and 1981)); The Survey of Income and Program Participation (SIPP- 1984–1987), Cornell Retirement and Well-Being Study (CRWB), but mainly the Health and Retirement Study (HRS)
Germany	German Socioeconomic Panel (GSOEP); FDZ-RV (2020), Ageing and Retirement in Europe (SHARE)
UK	British Household Panel Survey (BHPS); the English Longitudinal Study of Ageing (ELSA)
Sweden	LISA (a longitudinal database from Statistics Sweden for the total Swedish population) and the National Patient Register, Panel Survey of Ageing and the Elderly (PSAE - part of the Swedish Survey of Living Conditions); Survey of Health, Ageing and Retirement in Europe (SHARE)
Switzerland	The Swiss Household Panel (SHP), Survey of Health, Ageing and Retirement in Europe (SHARE)
Finland	Finnish Centre for Pensions (register data) + Current Population Survey (CPS)
Chile	Chilean Social Protection Survey (EPS)
Korea	Korean Labor and Income Panel Study (KLIPS)
Netherlands	SECMBUS register data from Statistics Netherlands on monthly primary sources of income, Labour Force Survey
Denmark, Austria, Belgium, France, Italy, Spain	Survey of Health, Ageing and Retirement in Europe (SHARE)
Source(s): Authors' own work	

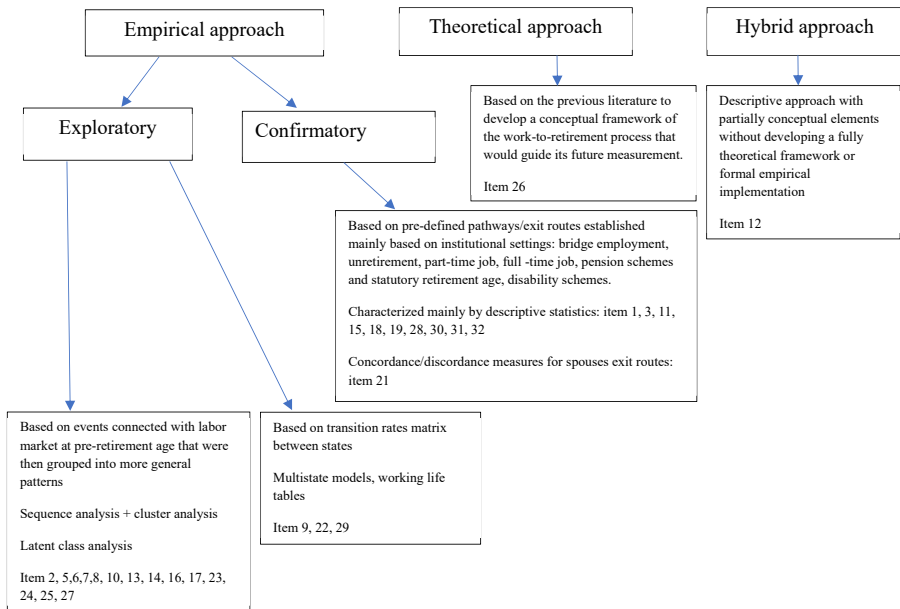


Figure 3. Approaches to identifying retirement pathways. Source: Authors' own work

In general, the approaches to analysing retirement pathways can be divided into three parts: the empirical, data-driven part (we included most of the analysed articles in this part), the theoretical part, which conceptualises the key elements for determining paths of professional deactivation (only one article was included in this part), and a hybrid part (one article) which includes conceptual or descriptive elements but does not develop a fully theoretical framework. It is also important to note that the studies included in the final sample are overwhelmingly based on quantitative empirical analyses. Most papers employ longitudinal survey or register data and apply statistical methods, while purely conceptual contributions are rare and qualitative approaches are virtually absent from the reviewed literature.

As for the theoretical approach, item 26 is a particular contribution. Its goal is to develop a conceptual framework of the work-to-retirement process that would guide its future measurement based on previous literature. The authors point out the elements that should be taken into account when analysing the work-to-retirement transition process. These are, e.g. employment (full time, part time, bridge), pension schemes (early, standard schemes with statutory retirement age, occupational schemes), disability, unemployment, and inactivity.

In the cases of empirical papers, the way the work-to-retirement process is analysed depends on the availability of data and the method of analysis adopted. What is clear, however, in this group of articles is the lack of conceptualisation of the approaches used in empirical analyses of the work-to-retirement transition process, the lack of standardisation of definitions, which causes difficulties in comparing results, or the variety of factors underlying analyses of the work-to-retirement process.

The empirical approach can be divided into two streams—confirmatory and explanatory—depending on the method used to identify retirement pathways. The confirmatory approach is based on pre-defined pathways/exit routes, mainly based on institutional settings: bridge employment, unretirement, part-time job, full-time job, pension schemes, and statutory retirement age, disability schemes. The exploratory approach, in turn, analyses actual patterns in retirement behaviour in late working age, and includes two groups. The first is based on

individual sequences of events connected with labour market transitions at pre-retirement age that were then grouped into more general patterns. The dominant methods here are sequence analysis in conjunction with cluster analysis or latent class analysis. The second approach is formed by models of transition between predefined states, usually connected with the labour market statuses at pre-retirement age, for which matrices of probabilities of transition between states at different points in time were calculated. The methods used in this approach include multi-state models, as well as working life tables. The reviewed methodological approaches differ not only in technique but also in the type of retirement pathways they are able to capture. Sequence analysis and latent class analysis are particularly well suited to identifying complex and heterogeneous retirement trajectories, as they reconstruct entire sequences of labour market states and group them into empirically derived patterns. In contrast, multi-state models focus on transition probabilities between predefined states, providing detailed information about the dynamics of specific transitions but typically offering less emphasis on holistic trajectory typologies. Descriptive approaches based on predefined pathways, often grounded in institutional settings, allow for clearer interpretation but may overlook more complex or non-linear retirement patterns. Together, these approaches provide complementary insights into the decomposition of retirement pathways.

A closer examination of the reviewed studies suggests that methodological choices are not neutral with respect to the structure of identified pathway typologies. Although a formal comparative analysis is beyond the scope of this review, a qualitative cross-reading of the studies indicates systematic differences in the types and complexity of pathways derived from different analytical approaches.

Studies applying sequence-based methods (e.g. sequence analysis combined with clustering) consistently identify a larger number of distinct and heterogeneous trajectories, often capturing indirect, unstable, or mixed pathways involving transitions through unemployment, disability, or intermittent employment. For example, sequence-based analyses in European contexts reveal multiple differentiated trajectories linked to labour market instability and institutional exit routes (2, 10). Similarly, studies incorporating multidimensional indicators (e.g. employment quality or health trajectories) tend to produce more nuanced and stratified pathway structures (14, 25).

In contrast, studies based on predefined categories or transition-focused approaches tend to identify a more limited and conceptually clearer set of pathways, typically centred around direct retirement, gradual exit, and re-entry into employment. For instance, analyses of bridge employment and unretirement focus on specific transitions within the retirement process rather than reconstructing full trajectories (18, 28). These approaches provide greater interpretability but may underrepresent the temporal complexity and sequencing of labour market states.

At the same time, despite these differences in analytical depth and granularity, there is a notable convergence across methods in terms of the core pathway types identified. Across both exploratory and confirmatory approaches, retirement is consistently represented as a multi-stage and potentially reversible process, encompassing direct (crisp) retirement, gradual or phased transitions, and indirect or institutionally mediated exits. This suggests that while methodological choices influence the level of detail and differentiation in pathway typologies, they do not fundamentally alter the underlying structure of retirement processes identified in the literature. In this sense, methodological approaches shape the resolution rather than the fundamental architecture of retirement pathway typologies.

Most of the papers in their literature review part referred to a wide range of factors shaping the transition from work to retirement, pointing to several groups: institutional factors related to retirement, pension, occupational and other benefit schemes, social or individual factors (education, health, relationship status, care-giving) - e.g. items 8, 28. They also pointed out that these factors form the temporal dimensions observed in retirement: (historical) context, (social) heterogeneity, and (biographical) pacing (e.g. item 7). These factors make the retirement pathways increasingly heterogeneous, dynamically combining working in various

forms with drawing a pension. Various variables have been used to identify exit routes from work to retirement. On the one hand, this indicates a rich palette of approaches that shows the complexity of the retirement process. On the other hand, it is a sign of a certain lack of conceptualisation of the retirement process, which makes comparisons between studies difficult.

In general, the variables that are used to describe the process of transition from work to retirement can be divided into two categories. The first category concerns core variables defining activity on the labour market and retirement status. But here, too, there is some variation in approaches, also related to the type of data available. The most commonly considered work status: (employed, unemployed, inactive) supplemented by additional information on the nature of work (full-time, part-time) - items 1, 3, 4, 5, 7, 9, 11, 15, 16, 18, 19, 21, 22, 23, 25, 27, 28, 29, 30, 32. Some works were based on sources of income, pension insurance (and pension spells), or benefit schemes, including disability schemes - for example, items 2, 4, 10, 13, 17, 24, 31. The second category of variables is additional factors that differentiate the analysis and identification of exit routes. These variables were introduced in parallel with the variables in the first category, leading to greater variation in the paths identified. These are mainly factors related to the nature of the job or job-career status, such as job type or work demands (e.g. items 9, 14). It is worth pointing out item 14 in this context, in which a constructed indicator of employment quality, based on variables relating to level of income, health insurance, and benefits, was used to determine exit routes. Another example of a variable from the second group is health status - item 6.

The variety of approaches and variables used to define retirement statuses naturally leads to a wide spectrum of identified exit routes. A comprehensive summary of the number and types of these pathways, as identified in the analysed articles, is provided in the [Appendix](#).

To answer the question of how retirement pathways are highlighted in the research, we synthesised how frequently particular pathway types appear across the reviewed studies. [Table 3](#) summarises the salience of the main pathway categories identified in the literature, indicating how many of the thirty-two analysed articles refer to each type, as well as the datasets and institutional contexts in which they are most commonly examined. Pathway types were coded based on the descriptions of exit routes reported in the reviewed articles and summarised in the [Appendix](#).

The results show that gradual and phased retirement pathways constitute one of the most frequently discussed patterns, appearing in approximately one-third of the analysed studies. These pathways are typically identified using large longitudinal surveys such as the Health and Retirement Study (HRS), SHARE, or ELSA, which allow researchers to track changes in working hours and employment status over time. Closely related to gradual retirement is bridge employment, which is also widely documented, particularly in studies based on U.S. datasets. This reflects institutional contexts where labour markets allow relatively flexible post-career employment arrangements. Another frequently highlighted pattern involves involuntary or alternative routes to retirement, such as transitions through unemployment or disability schemes. These pathways appear especially in studies based on administrative or register data from European welfare states, where institutional exit routes outside standard retirement are well established. By contrast, crisp or full retirement pathways, representing a direct transition from full-time work to labour-market withdrawal, are often identified in studies focusing on traditional pension transitions. Less frequently analysed but conceptually important are reversible pathways (unretirement), which capture returns to work after retirement. Finally, a small number of studies examine joint retirement trajectories among couples, highlighting the interdependence of retirement decisions within households. Taken together, these patterns confirm that literature emphasises the growing diversification of retirement trajectories, with gradual, reversible, and institutionally mediated pathways increasingly complementing the traditional one-step transition to retirement.

The diversified approach in examining the transition process from work to retirement manifests in many ways. Firstly, taking into account different periods and activity statuses.

Table 3. Salience of retirement pathway types in the reviewed literature

Pathway type	Number of studies (<i>n</i> = 32)	Typical datasets	Dominant institutional contexts
Gradual/phased retirement (including reduction of hours, phased exit)	11	HRS, SHARE, ELSA, GSOEP	Liberal and corporatist regimes with flexible labour markets and options for part-time retirement (USA, UK, Germany, Netherlands)
Bridge employment (employment after leaving career job but before full retirement)	10	HRS, CPS, BHPS, SHARE	Countries with flexible employment structures and weak restrictions on post-retirement work (especially USA, UK)
Crisp/full retirement (direct transition from full-time work to retirement)	9	HRS, SHARE, national panel surveys	Institutional systems with clearly defined statutory retirement ages and pension eligibility rules
Reversible pathways/unretirement (return to work after retirement)	7	HRS, ELSA, longitudinal panel surveys	Liberal labour markets enabling post-retirement employment (USA, UK)
Involuntary or alternative exits (unemployment, disability, inactivity before retirement)	11	Register data, SHARE, national pension registers	Welfare regimes with multiple benefit channels for labour-market exit (e.g. disability pensions in Finland, Netherlands, Germany)
Joint retirement trajectories (couple-based retirement coordination)	2	HRS, household panel surveys	Dual-earner household contexts, mostly analysed in the USA

Source(s): Authors' own synthesis based on the 32 reviewed studies

Secondly, including various institutional and personal factors that affect retirement decisions (retirement age, early pensions, health, family status, wealth). Thirdly, adjusting the measurement scales to the aim of the research by, e.g. grading of the statuses. Fourthly, analysing the official or declared statuses of individuals.

Recent research identifies a wide variety of retirement pathways that often diverge from the traditional, abrupt transition from full-time employment to complete labour market withdrawal. Based on the analysed papers, we can distinguish several groups of pathways: gradual retirement, crisp/full retirement, reversible/re-entry, involuntary/alternative and joint retirement trajectories.

Gradual retirement pathways are characterised by a reduction in work intensity before full retirement (items 19, 23, 29). *Partial retirement* involves a decrease in working hours, often accompanied by a change of employer or engagement in a bridge job (items 11, 19, 20). *Bridge employment* refers to a new job—typically with a new employer—undertaken after leaving one's career position but before complete retirement, serving as a form of gradual transition out of the labour force (items 15, 19, 20, 26). *Phased retirement*, in turn, entails a reduction in working hours with the same employer (items 11, 17, 19, 20, 26).

Crisp or full retirement pathways describe a direct transition from full-time employment to complete withdrawal from the labour market (items 2, 15).

Reversible or re-entry pathways (unretirement) capture situations in which individuals return to work—often in bridge employment—after a period of full retirement or labour force withdrawal (items 1, 15, 19, 20, 23, 26, 29). Such trajectories may result from uncertainty regarding health, finances, or satisfaction with retirement, leading individuals to revise their initial retirement plans (item 1).

Involuntary and alternative pathways encompass labour market exits not directly stemming from retirement decisions but rather from external or institutional factors. *Transitions through unemployment* involve a period of joblessness, often accompanied by unemployment benefits, before formal retirement. Entering retirement from unemployment may improve economic satisfaction, as pension benefits are typically more stable and generous than unemployment benefits (items 2,5, 10, 15, 16, 26, 32). *Transitions through disability* involve a period of receiving sickness or disability benefits before formal retirement; in countries such as the Netherlands and Finland, disability retirement has constituted an important alternative route out of the labour market (items 2, 5, 15, 16, 22, 26). *No-contact or inactivity trajectories* refer to individuals—often women—who were neither employed nor receiving benefits during the observation period prior to reaching retirement age, but who subsequently entered retirement (items 10, 16, 26, 27).

Finally, joint retirement trajectories are examined in the context of dual-earner couples, focusing on how partners coordinate their retirement decisions (items 21, 30). Several heuristic criteria are applied to classify these patterns (item 21). *Concordance* assesses whether partners share the same retirement status (e.g. both fully employed, both partially retired, or both fully retired). *First mover* identifies which partner transitions from full-time work first—the husband, the wife, or both simultaneously. *Initial status* indicates whether the first move was into partial or full retirement. *Backtracking* captures whether either partner increased their work intensity during the retirement process, signalling a return to employment.

The designated paths/exit routes were also subject to comparisons along various dimensions. The first dimension is cross-country comparisons, as discussed above. Additional dimensions of comparisons were gender (items 2, 7, 8, 13, 14, 17, 22, 28), ethnicity (items 1, 14), concordance/discordance between spouses (items 21, 30), and cohorts (items 17, 20).

Conclusions, limitations, and directions of further research

The decomposition of retirement pathways emerges not as an isolated trend but as a manifestation of profound structural and multidimensional shifts within contemporary societies and economies. At the individual level, it reflects the broader fragmentation and de-standardisation of the life course, characterised by overlapping, non-linear, and increasingly differentiated stages. Increasing longevity, coupled with improvements in health and functional capacity, has created new opportunities to extend working lives and reshape career trajectories well into what was traditionally considered “old age”. At the organisational level, evolving work environments - encompassing ergonomic adaptations, new managerial practices, and shifting workplace cultures - have enhanced the accessibility and attractiveness of employment for older workers. Macro-level factors, including pension system reforms incentivising later retirement, the proliferation of flexible employment schemes, atypical contracts, self-employment, and digitalisation, further contribute to blurring the once-distinct boundaries between work and retirement. Social factors such as gender roles, educational attainment, and family obligations add further layers of differentiation, resulting in highly heterogeneous retirement experiences (Henkens and Solinge, 2021; Jensen, 2024; Minhat and Suvanmanee, 2023; Vaalavuo *et al.*, 2025).

Our systematic review underscores that contemporary retirement transitions are defined by four fundamental characteristics: they are extended in time, complex in nature, individualised in expression, and reversible in direction. Workforce withdrawal more and more often becomes not a single, abrupt event but a prolonged process, often involving a sequence of states such as phased retirement, bridge employment, and unretirement. This process is shaped by a combination of quantitative (e.g. reduction in working hours) and qualitative (e.g. change in job demands) adjustments, allowing for trajectories that are tailored to individual capacities, preferences, and circumstances. The growing potential for reversal - exemplified by unretirement - further challenges the traditional unidirectional model of labour market exit, introducing a dynamic where movement between activity and inactivity becomes possible.

The destandardisation of retirement pathways is poised to intensify in the coming decades, driven by demographic ageing, shrinking labour supplies, and mounting pressures on public pension systems (Scott, 2021). Heterogeneous and flexible pathways offer a viable means of reconciling extended working lives with individual well-being and systemic sustainability. However, the current state of research is marked by significant conceptual and methodological fragmentation. Terms such as “pathways,” “trajectories,” and “routes” are often used interchangeably, while methodological approaches range from sequence and latent class analyses to descriptive typologies based on institutional settings. This lack of standardisation impedes comparative analysis and the cumulative advancement of knowledge.

While our review advances a structured synthesis of definitions, typologies, and methodological approaches, it does not constitute a fully specified analytical model of retirement pathways. Rather, the framework proposed in this study should be understood as an organising structure that integrates existing strands of research and provides a foundation for future model-building and empirical testing.

Two key methodological implications arise from our review. First, the concept of “retirement timing” loses its analytical precision as the exit process becomes blurred and extended over time. Future research should shift focus from pinpointing a single retirement event to analysing the entire “retirement period” as a continuum. Second, the phenomenon of unretirement introduces fundamental uncertainty into retirement analysis, making it difficult to determine the finality of labour market exit at any given point. This necessitates longitudinal designs and retrospective verification of retirement status.

The findings of this review align closely with the principles of the life course approach, which emphasises the interdependence of individual trajectories, social structures, and historical contexts across time (Ando and Modigliani, 1963). From this perspective, retirement is not an isolated event but a dynamic, cumulative process shaped by earlier life experiences, institutional opportunities, and social roles. The observed diversification of retirement pathways—gradual, reversible, involuntary, or joint—illustrates how later-life transitions are embedded within the broader sequencing of employment, family, and health trajectories. Life course theory provides an analytical lens for understanding how critical junctures, such as job loss, caregiving responsibilities, or policy reforms, generate heterogeneity in retirement outcomes. Consequently, retirement research informed by the life course framework moves beyond static categorisations toward an appreciation of timing, sequencing, and agency in shaping later-life transitions.

While most empirical studies focus on individual-level determinants of retirement behaviour—such as health, wealth, or family situation—relatively few integrate these factors within a multilevel analytical framework. The lack of theoretical integration between individual agency and institutional constraints remains a key limitation of the field. Drawing on life course and institutional theories could help capture the interplay between structural opportunities and biographical decision-making that shapes retirement pathways.

The heterogeneity of retirement trajectories cannot be fully understood without considering the institutional context in which they unfold. The predominance of studies from liberal and corporatist welfare regimes (e.g. the United States, Germany, the United Kingdom) leaves significant gaps in our understanding of retirement processes in Southern and Eastern Europe, as well as in non-European contexts. Future research should therefore adopt a comparative design that accounts for cross-national variations in pension systems, labour market flexibility, and gendered employment patterns.

Methodologically, the field remains dominated by quantitative sequence and latent class analyses, which, while powerful, often obscure the subjective and experiential dimensions of retirement. Mixed-methods approaches that integrate longitudinal quantitative data with qualitative interviews would allow for a deeper understanding of the meanings, motivations, and temporal dynamics underlying retirement transitions.

Although this review followed a systematic and transparent methodology, several limitations should be acknowledged. First, despite the use of multiple databases and rigorous

inclusion criteria, the analysis was restricted to English-language, peer-reviewed journal articles. This may have resulted in the exclusion of relevant studies published in other languages or in grey literature, potentially biasing the evidence base toward Anglo-Saxon contexts. Second, the heterogeneity of terminology and conceptual frameworks across studies limited the comparability of findings. Terms such as *pathway*, *trajectory*, and *route* were often used interchangeably, while operational definitions of retirement varied substantially. Third, the focus on quantitative and sequence-based analyses, with an almost complete absence of qualitative approaches, constrained the ability to capture the subjective meanings and lived experiences of retirement transitions. Finally, publication bias and time-lag effects cannot be ruled out, as more recent or null-result studies may not yet have appeared in indexed databases. Future reviews could address these limitations by incorporating mixed-methods evidence, expanding linguistic scope, and integrating comparative analyses across diverse welfare regimes.

A further methodological limitation concerns the inherent searching bias characteristic of systematic literature reviews. The scholarly landscape on pensions and later-life employment is exceptionally broad, and many studies address retirement pathways implicitly through analyses of labour market exit, institutional transitions, or income sources, without using the terminology that guided our search strategy. A broader search string – incorporating general terms such as retirement, pension, or labour force withdrawal – would have produced an unmanageably large corpus of studies, diluting the focus of this review and compromising analytical rigour. Conversely, a more focused terminology risks omitting valuable contributions that conceptualise analogous phenomena under different labels (e.g. retirement sequences, retirement patterns, labour market exit sequences, or later-life employment trajectories). As a result, the specificity of the search terms may have shaped the composition of the identified evidence base.

To mitigate this structural limitation, we supplemented the database searches with a small number of studies selected through expert judgement. Although this approach reduces full replicability, it enriches the evidence base and aligns with best practices for reviews in fields characterised by conceptual heterogeneity. Nevertheless, in a field of this breadth and conceptual dispersion, no feasible search strategy can fully eliminate omission bias.

In conclusion, the decomposition of retirement pathways represents both a challenge to conventional models of labour market exit and an opportunity to foster active ageing, maintain workforce participation, and enhance the sustainability of welfare systems. For policymakers, recognising this destandardisation is essential for designing adaptive pension systems and labour market institutions that can support diverse late-career trajectories. For researchers, future efforts should prioritise conceptual harmonisation, methodological innovation—particularly through mixed-methods designs that integrate quantitative and qualitative insights—and cross-national comparative studies. Addressing these challenges will be crucial for advancing both academic understanding and evidence-based policy in an era of prolonged and pluralised working lives. Future research should aim to further formalise the proposed framework by specifying causal mechanisms, testing relationships between pathway types and outcomes, and validating its applicability across institutional contexts.

Table A1. Summary of the designated modes of retirement within the analysed articles

Item*	Number of identified exit routes/pathways	Names of identified exit routes/pathways
1	6 (only paths leading to unretirement)	(1) Work- >Full Retirement- >Full Retirement. (2) Work- >Full Retirement- >Part-Time Work (3) Work- >Full Retirement- >Full-Time Work (4) Work- >Partial Retirement- >Partial Retirement (5) Work- >Partial Retirement- >Full Retirement (6) Work- >Partial Retirement- >Full-Time Work
2	4 in Germany and 5 in UK	<i>UK:</i> (1) traditional: full-time employment (2) early entry: transitional occupational pension: male and female (3) disability (4) non-standard employment: self-employment and part-time employment (5) non-standard employment: spouses' previous employers' pension and entry at state pension age <i>Germany:</i> (1) traditional: full-time employment (2) early entry: unemployment/pre-retirement (3) disability (3) non-standard employment: self-employment and part-time employment (4) non-employment: widow pension and no own income until state pension age
3	3	(1) the complete retirement type, (2) the hopping type of post-retirement, (3) the continuity type of post-retirement
4	7	<i>A. Full retirement</i> (1) full-time work, no benefits - > two benefits, no work (2) full-time work, no benefits - > one benefit, no work <i>B. Partial retirement</i> (3) work, no benefits - > work and benefit(s) (4) work, one benefit - > two benefits, may have work <i>C. Other</i> (5) work and benefit(s) - > benefit(s) - no work (6) no work, no benefits - > benefit(s), may have work (7) no work, one benefit - > two benefits, may have work
5	8	(1) standard retirement (2) late retirement (3) unemployment (4) disability (5) long-term disability (6) part-time retirement (7) early retirement (8) death
6	8	<i>A. Early/on time retirement trajectories:</i> (1) early/on time retirement in good health (2) early/on time retirement in intermediate health (3) early/on time retirement in poor health <i>B. Late retirement trajectories:</i> (4) partial retirement in good health (5) partial retirement in intermediate health (6) late retirement in poor health <i>C. Out of the labour force trajectories:</i> (7) out of the labour force in heterogeneous health (8) early death

(continued)

Table A1. Continued

Item*	Number of identified exit routes/pathways	Names of identified exit routes/pathways
7	5	(1) delayed entry pathway (2) orderly pathway (3) high-g geared pathway (4) steady part-time pathway (5) intermittent pathway
8	12	A. <i>Early retirement</i> (1) anticipated exit (2) anticipated exit from full-time job (3) early exit B. <i>On-time retirement</i> (4) retirement at FPA from a full-time job (5) retirement around FPA from a full-time job (6) retirement around FPA from part-time job C. <i>Extended working life pathways</i> (7) late retirement from a full-time job (8) late retirement from part-time job (9) gradual retirement D. <i>Retirement from no job</i> (10) retirement around FPA from out of the labour force (11) late retirement around FPA from out of the labour force (12) retirement around FPA from disability
9	6	(1) specific vocational preparation (2) unemployment (3) physical demands (4) return on experience (5) occupational growth (6) out of the labour force
10	9	(1) employment average high (2) employment high (3) employment average low (4) employment low/marginal (5) early retirement (6) mix (caregiving plus marginal employment) (7) unemployment (8) voluntary (contributions, self-employed) (9) no contact with GRV
11	1	(1) bridge employment
12	not applicable	not applicable
13	8	(1) standard retirement (2) long career (3) early retirement (4) part-time retirement (5) unemployment (6) disability (7) long-term disability (8) death

(continued)

Table A1. Continued

Item*	Number of identified exit routes/pathways	Names of identified exit routes/pathways
14	10	<ol style="list-style-type: none"> (1) Wealthy Business Owners (2) Independent Contractors/Gig Workers with Financially Delayed Retirement (low earnings). (3) Great EQ (employment quality) to Well-off Retirement (high income, health insurance, paid leave) (4) Good EQ to Well-off Retirement (lower income, health insurance, paid leave) (5) Fair EQ to Good but Diminishing Wealth in Retirement (6) Poor EQ to Delayed and Poor Retirement (7) Minimally Attached and Returning to the Workforce (8) Workers with Premature Mortality (9) Minimally Attached and Well-off (10) Unattached and Poor
15	8	<ol style="list-style-type: none"> (1) full retirement - transitioning directly from full-time work to retirement (2) gradual retirement- those who first reduced work hours (3) unretirement- those re-entering the work force for full- or part-time work after a period in which the participant was identified as retired and did not work for pay (4) always full-time work (5) moves to part-time work (6) unemployment → retirement - those with a period of unemployment immediately before retirement (7) disability → retirement - those with a period of disability immediately before retirement (8) complex pathways
16	7	<ol style="list-style-type: none"> (1) late retirement (2) early retirement (3) premature retirement (4) disability (5) drop-out (6) unemployment (7) inactivity
17	not applied	not applied
18	Based on work status: 4 Based on current job status: 4	<p><i>Based on work status</i></p> <ol style="list-style-type: none"> A. not working since 49 B. working since 49 <ol style="list-style-type: none"> (1) working bridge jobs (full-time and part-time) (2) working a full-time career (3) working - other (marginal meaning) (4) not working now, but the last job was a full-time career or bridge job <p><i>Based on the current career status</i></p> <ol style="list-style-type: none"> (1) career bridge (full-time and part-time) (2) still on career job (3) career out (4) career bridge out (full-time and part-time)
19	3	<ol style="list-style-type: none"> 1) still on a career job 2) moved to the bridge job 3) moved to no job
20	4	<ol style="list-style-type: none"> (1) move to no job (2) bridge jobs (3) re-entry (4) phased retirement

(continued)

Table A1. Continued

Item*	Number of identified exit routes/pathways	Names of identified exit routes/pathways
21	9 joint trajectories for wife and husband	(1) husband: working full time, and wife: working full time (2) husband: working full time, and wife: partially retired (3) husband: working full time and wife: fully retired (4) husband: partially retired, and wife: working full time (5) husband: partially retired, and wife: partially retired (6) husband: partially retired, and wife: fully retired (7) husband: fully retired and wife: working full time (8) husband: fully retired, and wife: partially retired (9) husband: fully retired, and wife: fully retired
22	not applied	The multistate tables were estimated with transition ratios between the states: work-disability, in the labour force, retirement, and death, for single years from 50, separately for men and women
23	4	(1) gradual retirees (2) early retirees (3) intermittent workers, (4) derived beneficiaries
24	5	(1) late labour market exits (2) early pension withdrawal (3) standard retirement (4) low income from work (5) early transitions into full retirement (6) labour market exits via disability pensions
25	4	(1) Early-Crisp (2) Early-Gradual (3) Late-Crisp (4) Late-Gradual
26	8 possible states between which transitions can be observed throughout the work-retirement process	(1) employed before SRA (statutory retirement age) without a pension (2) employed beyond SRA without a pension (3) employed before SRA with early pension (4) Employed beyond SRA with early pension For states 1–4, also such dimensions should be included: - regular work duties - part-time work - lower work demands - part-time work with lower work demands - break from duties (5) Non-employed before SRA with early pension (6) Non-employed beyond SRA with early pension For states 3–6, also such dimensions should be included: - full pension - partial pension - disability pension - other early pension (7) Non-employed before SRA without early pension (8) Non-employed beyond SRA without early pension For states 7–8, also such dimensions should be included: - unemployment - economic inactivity
27	5	(1) early retirement (2) on-time retirement (3) late retirement (4) part-time work (5) not in the labour market

(continued)

Table A1. Continued

Item*	Number of identified exit routes/pathways	Names of identified exit routes/pathways
28	1	(1) unretirement: (a) reported being fully retired and recommenced full-time or part-time paid employment in a subsequent wave (b) began full-time work following partial retirement in a previous wave
29	not applied	not applied
30	81 transition patterns	Pathways were not named
31	5	1) People who made a straightforward transition from work to retirement, the no-transfer group 2) People who have received only sickness benefits 3) People who have received a combination of disability pension and sickness benefit 4) People who received transfers related to unemployment 5) People who, before retirement, received a mixture of health- and unemployment-related transfers
32	3	(0) no retirement transition (no retirement) (1) retirement from work (full or part-time employment and full or part-time self-employment) (2) retirement from unemployment (3) retirement from other status (permanently disabled and/or/and unfit to work, fulfilling domestic tasks and care responsibilities, a pupil, student, in further training, engaging in unpaid work experience, in compulsory military community or service, and other inactive person)

Note(s): * Item numbers correspond to the articles listed in Table 1

Source(s): Authors' own work

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