

Article

Advancing Revolving Funds for the Sustainable Development of Rural Regions

Nils-Magnus Wasser ¹, Philipp Ruhstorfer ² and Björn-Martin Kurzrock ^{1,*} 

¹ Real Estate Studies, Technische Universität Kaiserslautern, Paul-Ehrlich-Straße 14, 67663 Kaiserslautern, Germany; nils.wasser@bauing.uni-kl.de

² IPU, Breite Gasse 4-5, 99084 Erfurt, Germany; P.Ruhstorfer@ipu-erfurt.de

* Correspondence: bjoern.kurzrock@bauing.uni-kl.de; Tel.: +49-631-205-2906

Received: 15 September 2020; Accepted: 10 October 2020; Published: 14 October 2020



Abstract: Financing measures and incentive schemes for (existing and new) building owners can promote the sustainable settlement development of rural regions or municipalities and, in a wider sense, entire countries or cross-border regions. In order to be used on a broad scale, the concept of revolving funds must continue to be further developed. In this research, the concept of an advanced revolving housing fund (ARF) for building owners to support the sustainable development of rural regions and potential mechanisms are introduced. The ARF is designed to reflect impacts and challenges with regard to rural regions in Germany, Europe and beyond. Based on New Institutional Economics, the Theory of Spatial Organisms, an expert workshop, interviews and discussions and further literature research, the fundamentals for incentive schemes and the essential mechanisms and design aspects of the ARF are derived. This includes the principal structure and governance of a holding fund and several regional funds. Based on this, input parameters for the financial modelling of an ARF are presented as well as guiding elements for empirical testing to promote more research in this area. It is found that the ARF should have a regional focus and must be a comprehensive instrument of settlement development with additional informal and formal measures. The developed concept promises new impulses, in particular, for rural regions. It is proposed to test the concept by means of case studies in pioneer regions of different countries.

Keywords: revolving fund; financing instruments; rural areas; rural regions; real estate development; property development; sustainable rural development

1. Introduction

1.1. Problem Specification

Until today, development areas and the associated land use in greenfield developments have been the answer in many countries and regions to satisfy the demand for housing. As a result, many rural regions and municipalities face an oversupply of residential building areas, transformed cultural landscapes, vacancies and functionless centres or high burdens on municipal budgets due to development and follow-up costs. The supply of living space in rural regions is only partly matching the demand of those seeking property. Even today, the low demand for standing properties in shrinking regions is already leading to a loss in asset values for owners. The resulting reduced willingness of owners to invest often leads to a downward spiral of vacancies, a reduction in property values and a further lack of investment in the building fabric (see [1]).

These transformation processes regularly overstretch the property market in the affected regions. An increasing oversupply of partly ailing building fabric combines with an ever-decreasing demand. The recovery of settlement structures is a social task due to the already completed and imminent

structural change processes. The review of settlement strategies in rural regions with regard to survival and recovery—and the necessary social interest—is the logical consequence of demographic and social change in many countries (see [2–4]). Economic instruments to promote investments in the building stock have often fallen short of expectations. What is needed are integrated instruments that combine financial incentive instruments with additional targeted measures against prevailing barriers to investment in standing properties and sustainable settlement strategies.

Financing measures and incentive schemes for (existing and new) building owners can promote the sustainable development of rural regions or municipalities and, in a wider sense, entire countries or cross-bordering regions. The scope of the internal tasks requires a strong coordination of the diverse planning and funding instruments as well as a more preventive, problem-specific approach. Revolving funds are particularly suitable as instruments for rural regions. They enable regional authorities to meet the considerable refinancing and financing requirements for the necessary interim acquisition of land, the provision of land, the reorganisation and clearance of land, innovative planning procedures and intensive individual consultations [5].

In order to be used in a broad and meaningful way internationally, the concept of revolving funds must continue to be further developed. Special adaptations are required for their successful application, especially in rural regions. There is a relevant need for research in this field, which should also receive international attention.

1.2. Aim of Research/Research Questions

The basic idea behind this research is the introduction of a fund-based financial instrument for the sustainable development of the built environment in rural regions in the context of shrinkage spirals. The fund is to be fed by public sources or loans and managed in part on a revolving basis in a repeated cycle of loans and repayments. This paper introduces the concept of an advanced revolving housing fund (ARF) for property owners to support the sustainable development of rural regions and describes potential mechanisms. The ARF is designed to reflect impacts and challenges with regard to rural regions in Germany, Europe and beyond. Furthermore, the paper aims to promote ongoing research on alternative financing measures and incentive schemes for building owners in rural regions. Specifically, we investigate the following research questions:

1. What are the particular challenges for the ARF in promoting the sustainable development of rural regions?
2. What are the essential features and mechanisms of the ARF?
3. What are the most important design aspects for the ARF in rural regions?
4. What are the key input parameters for the financial modelling of the ARF for rural regions?

The results of this paper are intended to enable regional planners, private and institutional owners, policymakers and administrative bodies to reflect, adapt and bring forward novel financing measures and incentive schemes for the sustainable development of the built environment in rural regions.

2. Theoretical Framework

2.1. The Theory of Spatial Organisms

Many rural regions are facing major changes in their building stock across the world [6] (p. 20), [7]. The mutual overlapping and intensification of agricultural–structural, economic, infrastructural and demographic change lead to a growing structural vacancy of buildings in rural regions. Vacant properties often have a negative effect on surrounding areas (broken windows theory). Social effects appear as growing distance between neighbours, the disbandment of associations and decreasing identification with the local area. Often, the individual consequences of vacancies reinforce each other to form a vacancy spiral. Many owners are not willing or able to counteract this spiral. The financial means of regional authorities are limited as well [8] (p. 125). Regions with structural

problems are also faced with the problem that the market volume and the number of locally rooted investors is rather small.

All these phenomena are in accordance with the Theory of Spatial Organisms: Schleiter [9] describes regions as symbiotic organisms with several sub-surface organisms (Figure 1). The dynamics of the “organic-evolutive” concentration processes in these organisms must be utilised by allowing the environment to benefit from the advantages of a centre, while, at the same time, bringing their own advantages, such as cost or ecological benefits, into the symbiosis and developing them further. Thus, each organism has a distinct function and share in the development of the whole [9] (p. 329). Moreover, any organism is the sum of its parts, which, again, also interact with each other. If we see regions as symbiotic organisms (or as social systems, as in [10]), we notice the manifold interdependencies that must also be reflected in financial instruments for the sustainable development of built environments. Social systems are susceptible to particular barriers in the behaviour of individuals, which can be counteracted by incentive schemes as set out in New Institutional Economics.

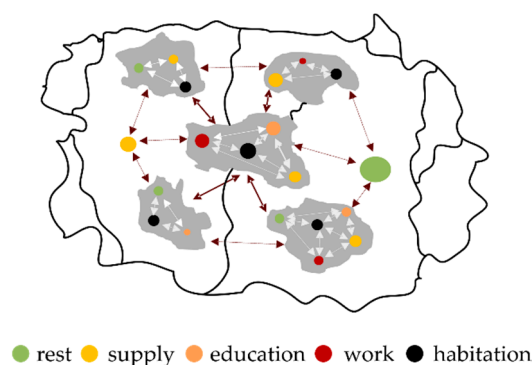


Figure 1. Regions as symbiotic organisms.

2.2. New Institutional Economics, Barriers and Incentive Schemes

Financial instruments, here, in particular, incentive schemes for ARF, should consider findings from New Institutional Economics (NIE). To date, two older theories dominate theoretical and economic policy discussions: Neoclassical Economics and Keynesianism. Opportunistic behaviour and the limited rationality of individuals, transaction costs, asymmetric information, and change in knowledge and market imbalances are explicitly considered in NIE [11]. Due to transaction costs, individuals tend to accept only adequate, rather than seeking complete, information. According to NIE, knowledge and information are imperfect and asymmetrically distributed. Individuals have different levels of knowledge, which results in different market power [12]. The NIE also assumes that individuals always pursue individual goals and try to maximize their own benefit within the institutional framework. Some individuals are prone to opportunistic behaviour. Therefore, coordination and motivation problems arise, which must be overcome by creating institutions [11,13]. Incentive schemes are intended to motivate individuals to adopt characteristic behaviour. Targeted incentive schemes should strengthen or reduce certain behaviours and barriers. The incentive instruments can be either material or immaterial. Even small incentives (nudging) can influence people’s behaviour in a predictable way, as [14,15] show. Emotional aspects (biases) affect the rationality of human decision-making processes often subconsciously and unnoticed [15].

Decision-making processes on the acquisition of property or the implementation of refurbishment measures are complex and must consider various factors (financial resources, structural conditions, the market environment, etc.). Only rarely is one factor crucial, and the relative influence of the individual factors can change within the process [16]. In addition to technical and economic factors, socio-economic factors such as the individual living situation, age or personal attitudes are important influencing factors, especially for owners of single-family homes [17].

It is essential for the acquisition of a property and the planning of refurbishment measures that the intention to use the property is sustainable. For private building owners, the main reason for refurbishments is usually the necessary maintenance of the building and adaptation of the building to personal needs, especially upon acquisition [18–20].

Other reasons include ecological convictions and legal regulations as well as the will to save energy costs or increase living comfort. Unless a new need arises, there is usually no further consideration of refurbishment measures, and specific barriers become effective (Table 1). These can be purely factual restrictions or also emotionally influenced. In addition to constructional and personal barriers, economic and socio-economic barriers are of central importance. Emotional aspects or biases may affect all of these pillars, as do a lack of information, a lack of knowledge or information asymmetries that translate into information-based barriers. Not every barrier necessarily prevents refurbishment. Barriers can also cause a project to be adapted or postponed.

Table 1. Barriers to refurbishment faced by private building owners [18,21,22].

Barriers			
Economic	Socio-Economic	Constructional	Informational
Insufficient liquidity and credit rating	Life situation (age, income, etc.)	Protection of historical monuments	Negative reports
Investor-user dilemma	Reservations concerning preparatory work	Concern about structural damage	Lack of technological/economical knowledge
Long payback period	Preference for visible values	Planning and implementation too difficult	Adverse third-party influence
Complex grant application	Practiced habits	Fear of aesthetic limitations	Insufficient quality of advice
Emotional aspects/biases (e.g., concern/fear, affect, anchoring, lock-in, and sunk costs fallacy)			
Lack of information/lack of knowledge/information asymmetries			

It is impossible for one instrument alone to address all the existing barriers. This requires a broad mix of instruments. By using a revolving fund model—with scalable incentives—in particular, economic barriers can be counteracted.

Financial instruments, here, in particular, incentive schemes for an ARF, need to provide building owners with adequate information, appropriate for their particular level of knowledge, so that individuals are able and willing to make decisions. Too much information may even lead to inaction [16]. Unexperienced building owners will particularly be reliant on trustworthy institutions and qualified advice within their individual social system. Such advice should consider emotional aspects and biases, without, of course, manipulating individuals against their actual needs and perceptions. It is essential that owners can bear the resulting costs financially and retain sufficient degrees of freedom for any future change.

2.3. Existing Fund Models

Revolving financial instruments are still a relatively new phenomenon originating from Europe. Since 2007, the EU has offered support for integrated urban development projects through structural funds with revolving financial instruments in addition to funding through grants (JESSICA initiative). Instead of the previous public support, it should be possible under certain conditions to transfer European Regional Development Fund (ERDF) resources to revolving funds. These funds can grant concessionary loans, guarantees and equity investments to projects that have financing difficulties on the capital market. This is intended to close existing financing gaps for projects and increase the efficiency of public funding [23] (p. 17).

The establishment of a revolving fund offers the possibility of using returns from funded projects to support new projects with the same amount of funds. Fund resources can therefore be used multiple times. In addition, the following further advantages result [6,23]:

- The mobilisation of additional resources and investments (public and private funds, leverage effect);
- Risk diversification by spreading the fund resources over several projects;
- Increased pressure for efficiency due to repayment obligation;
- Sustainable fund returns allow continuous investments;
- Periodic review of projects (target/actual checks);
- Use of skills from public and private shareholders, including the financial sector.

Revolving funds for the sustainable development of rural regions can be introduced at different levels. There are two main organisational structures for implementation (Figure 2):

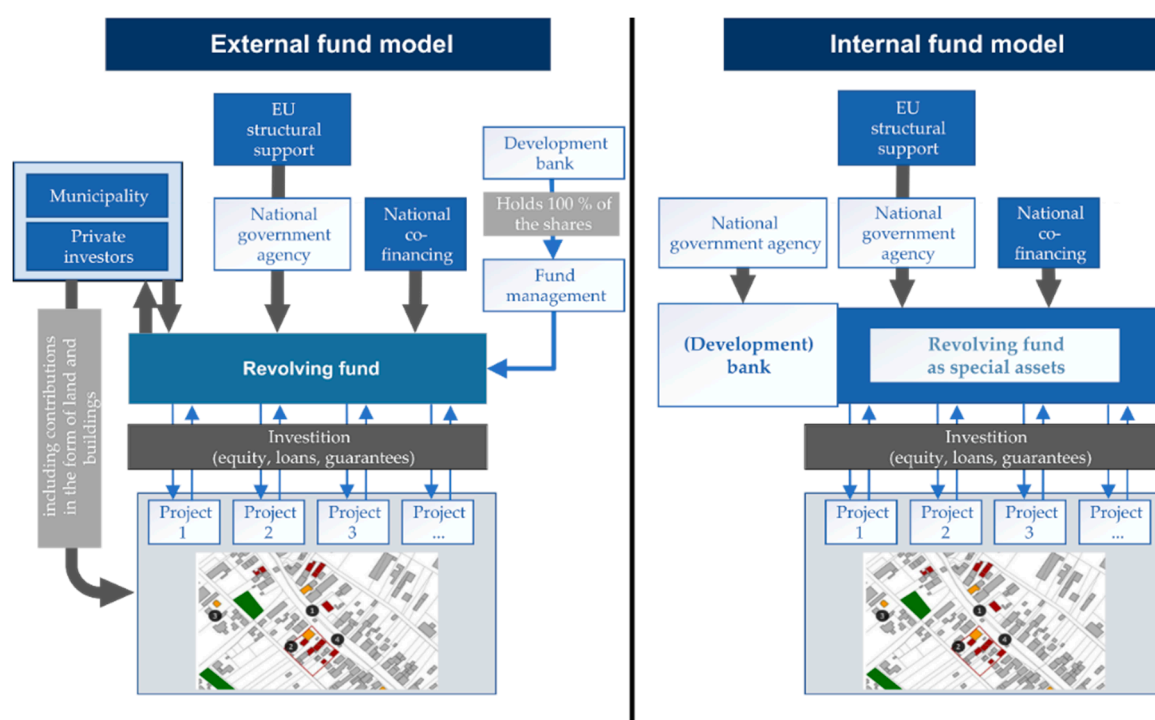


Figure 2. Fund models (according to [6,24]).

An internal fund does not constitute an independent legal entity. State development banks could install this fund model to support rural regions [24]. The fund is a special asset separate from the other assets of the bank (“bank special asset”). In this sense, the development bank would be the fund owner and fund manager. The banking licenses of development banks usually allow for using three revolving financing instruments. In the present model, Model 1, the bank would be responsible for project appraisal, funding decisions and the monitoring of the projects in question. A disadvantage of this model may be the strong ties to the respective development bank, which limit the degrees of freedom for the fund [25].

In Model 2 (external fund), the fund management is governed by an independent management. In this case, the fund constitutes an independent legal entity. The fund management could be invited through a public tender and initially be contracted for a limited period through an agency agreement. If the fund management were realised by a financial institution with a banking license, guarantees and loans could also be granted by the fund [24,25].

In addition to these two fund models, it is possible to set up a holding fund that operates various sub-funds (Model 3). The sub-funds could be set up thematically or regionally and may pursue

different investment strategies. This makes it possible both to address different target groups and to combine different financing instruments.

A revolving fund can be financed in various ways under the JESSICA initiative (Appendix A). On the one hand, financing purely from public sources is possible. In this case, private sector co-financing is only provided at the project level, for example, in the form of public private partnerships (PPP). On the other hand, private funds can already be involved at the fund level alongside public funds. Specific arrangements can be made to cover losses and distribute profits.

Compared to in the rest of Europe, the development and implementation of local or regional urban development funds (UDFs) has not gained much momentum in Germany. There are several reasons for this, which will also apply to other countries [6,23,26]:

- Lower appeal due to persistently low interest rates on the capital markets;
- The easier management of existing subsidy-based programs for municipalities;
- The need to implement new administrative structures and knowledge of urban development funds on the public administration side;
- A lack of compatibility between urban development support and funds;
- A lack of economies of scale due to rather small project sizes;
- High administrative and accounting costs (ERDF funds);
- The difficult pre-financing of ERDF resources (reimbursement principle) in tight budget situations; this may partially be offset by interest income from the fund.

ARFs aim to be more than merely a financing instrument. The mechanisms of an ARF should also account for reducing other barriers (Table 1) to promote the sustainable development of the built environment, particularly in rural regions.

In the UK and the Netherlands, the JESSICA initiative was successful and the funds are still working effectively today. Although a UDF must not be equated with funds for rural regions, some conclusions can be drawn from JESSICA:

- Independent fund management made it possible to better meet local needs.
- The establishment of a holding fund made it possible to set up new funds where necessary and to integrate them into different political fields of action.
- Small capital volumes mitigate reservations regarding the decision between subsidy or fund.
- The opportunity to re-use the fund capital without European restrictions is recognised.
- The integration of private actors proved to be difficult, although JESSICA called for it: the governance structure should be designed to be easily manageable so that private capital is combined with fund resources only at the project level.

3. Materials and Methods

3.1. Initial Research Phase

The starting point for the idea of advancing or rethinking revolving funds was in 2013, when evaluations of rural regional development processes for settlement development in Germany were carried out. These were followed by further evaluations, qualitative expert interviews and the obtaining of second opinions (from majors, building authorities, credit institutes and funding bodies), which unambiguously supported the demand for new solutions dealing with settlement development and efforts to reinforce the concept of the ARF. The present instruments in Germany seemed to be appropriate but not sufficiently comprehensive for the challenges of settlement development. Consequently, the idea of ARF was successfully submitted as a proposal for the “call for ideas” of International Building Exhibitions (IBA) Thuringia in 2015. In the course of IBA Thuringia, the concept was qualified by literature research, additional expert interviews and discussions. This led to an expert workshop (Appendix B, [26]) in Arnstadt in March 2016. The workshop was particularly crucial for Research Questions 2 and 3 and addressed three of the most important issues of the ARF:

- The investment needs of the ARF;
- The organisational structures of the ARF;
- Financing the ARF.

Due to the complexity of the topic and the heterogeneity of rural regions, the demand for field research and practical tests was noted. The IBA Thuringia supported the idea of the ARF in terms of content but could not provide any financial means. Thus, dialogue with the Federal Agency for Agriculture and Food (BLE) in Germany was set up, and options for ongoing practical evaluations of regional development processes are under review. Furthermore, possibilities for the implementation of the ARF model projects in Thuringia and Bavaria are being discussed with public funding bodies such as the Agency for rural development Upper Franconia (ALE Oberfranken) or the Thuringia Regional Office for agriculture and rural areas (TLLLR). Key results from the written documentation of these interactions have also been incorporated into this research with regard to Research Questions 2–4.

3.2. Research Approach

This research first reviews literature and statistics on the typical situation of the building stock in rural regions of Germany (Research Question 1) as the underlying case for developing the mechanisms of the ARF. The reason why Germany was chosen as an example is that good research and statistical data are available on the housing stock and building owners in rural regions for this country. Moreover, it is assumed that the relationships will, in general, apply similarly to other countries, at least within the European Union. Since ARF mechanisms need to be fine-tuned to national particularities anyway, this assumption should only be considered as a small limitation for the course of this research. The particular challenges for ARFs in rural regions were reflected when deriving the features for the ARF in Section 4.1.

Primarily, the written documentation of the expert workshop, interviews and discussions were used as a basis with regard to Research Questions 2–4. These relate to the essential mechanisms and design aspects of the ARF, which are postulated in Sections 4.2 and 4.3. The written documentation of the expert interviews and discussions underpin the input parameters for the financial modelling of the ARF presented in Section 4.4. Remaining questions from the initial research phase served as guiding elements for the empirical testing that is presented in Discussion Section 5 to promote more research in this area.

3.3. Background

3.3.1. Heterogeneity of Rural Regions

The perception of rural regions mostly follows stereotypical patterns without a common agreed definition. Rural regions are characterised by agricultural land use and low population density. In Germany, the characteristics of density, centrality and accessibility are used to define these areas. On the one hand, rural regions are idealised as quiet, natural areas with small, intact communities. On the other hand, rural life is often associated with car dependency, a low supply of services and culture and a high level of social control [27].

Rural regions are increasingly regarded as deficit areas. However, this ignores the rural regions' diversity. There are considerable regional differences between and within regions (Figure 3). Their organic development is also determined by numerous "hard" and "soft" influencing factors, resulting in a wide variety of situations within socio-economic, demographic and natural areas. It is difficult for a single cross-regional fund to take up the challenge.

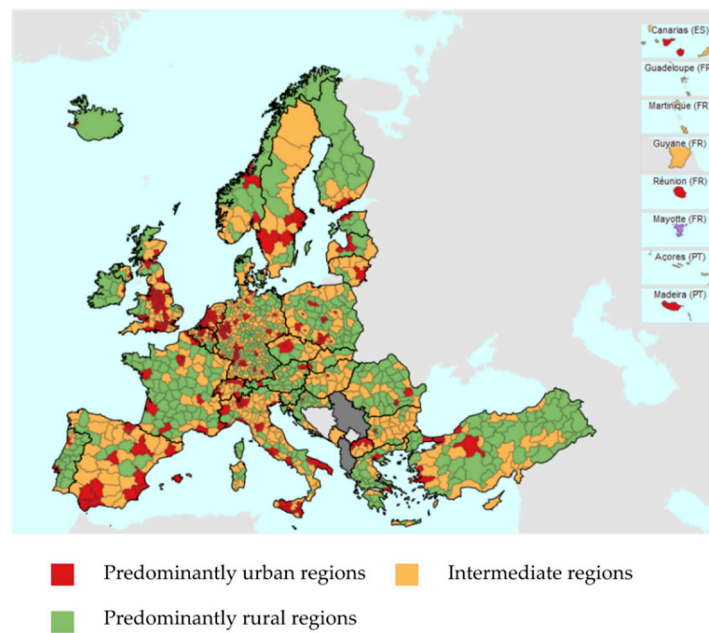


Figure 3. Types of regions within the EU [28].

3.3.2. Building Stock

The diversity of the building stock is outlined for Germany as an example. Around 7.6 m of the approx. 18.9 m buildings in Germany are in rural regions, with 13.1 m dwellings. More than half of the buildings are located in rural regions with greenfield planning restrictions. Depending on the region, the proportion of single-family houses exceeds 90%. In contrast to in urban regions, the majority of the existing dwellings are owner-occupied (approx. 50%). The share of rental housing is only 41% (urban: 57%) [29].

The average vacancy rate in rural regions is 5.4% (urban: 4%), with significant regional differences (Figure 4). Of the dwellings in rural regions, 94% belong to private persons. Unlike in urban regions, private housing companies play a subordinate role (share of dwellings: 2%).

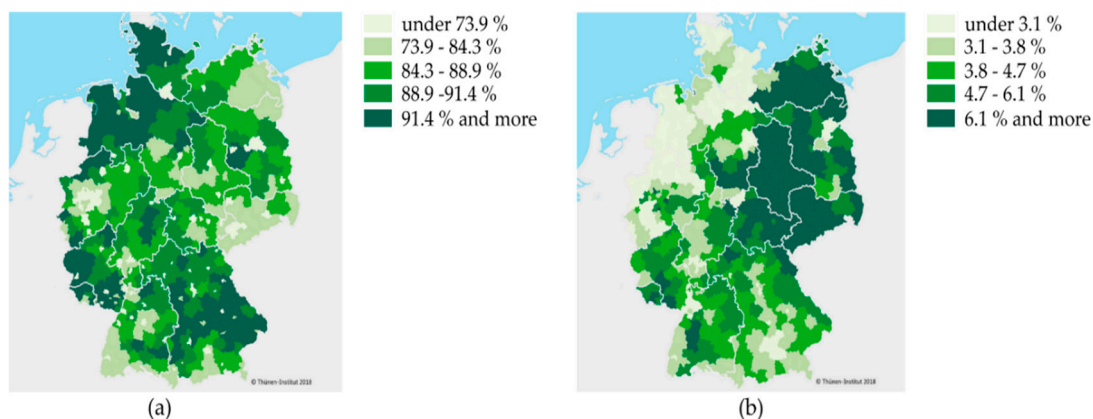


Figure 4. (a) Share of detached and semi-detached houses in rural regions; (b) Vacancy rates of dwellings in rural regions [30,31].

Compared to urban regions, rural regions have a significantly higher proportion of old buildings (Figure 5). Around 30% of the buildings were built before 1950 (urban: 22%). At the same time, 25% of the buildings are less than 20 years old. Many of the older buildings are in poor structural condition and have a high refurbishment requirement.

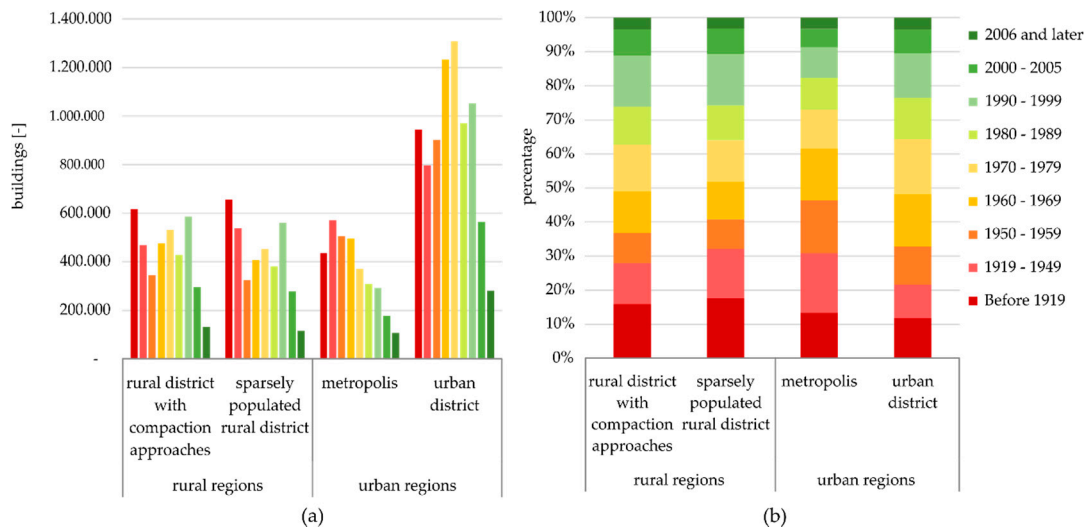


Figure 5. (a) German building stock classified by age classes (absolute frequency); (b) German building stock classified by age classes (relative frequency) [29].

3.3.3. Building Owners

Demographic change is leading to shrinking and ageing processes in many rural regions. While the economically strong and more densely populated rural regions show a relatively stable population development and low intensity of demographic ageing, the negative economic, social and demographic developments are concentrated in structurally weak regions [26,27].

Regional disparities are likely to increase further. For urban centres with high growth dynamics, a comparatively younger age structure can be expected; by contrast, structurally weak regions will be affected by the further emigration of young people, which will lead not only to increasing population losses but also to a more pronounced ageing of the population and, simultaneously, to a weakening of demand in the housing markets [26].

In addition, more rural regions are generally characterised by lower employment and income opportunities. While rural regions in the suburban belt have caught up in recent decades, many remote, structurally weak rural regions remain disadvantaged. Depending on the type of region, disposable income averages between 20,300 and 22,900 €/a in Germany (Figure 6). There are considerable income disparities between the individual regions. Rural regions with a densification approach tend to achieve higher average values than peripheral rural regions [32] (p. 27).

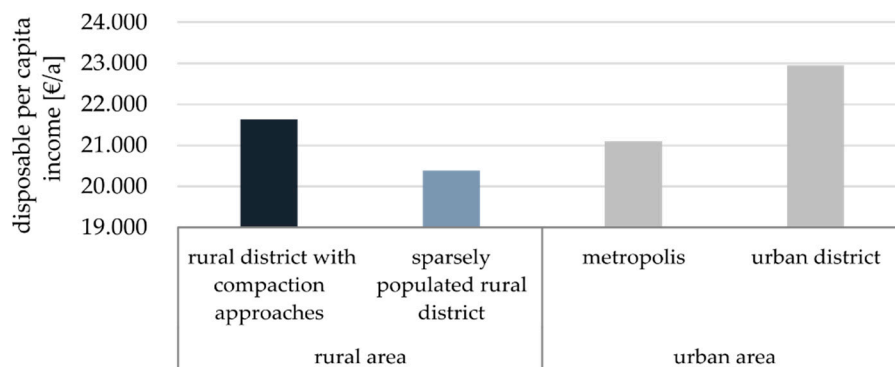


Figure 6. Disposable per capita income classified by type of regions (Germany) [33].

In Germany, around 74% of disposable income is spent on private consumption. Private households in rural regions therefore have only a limited amount of equity available for the refurbishment of their buildings. In addition, low-income households tend to own older buildings with higher refurbishment requirements [34].

Typical refurbishment costs for single-family homes range between EUR 600 and 1400/m²_{gfa} (multi-family house: EUR 1400–1200/m²_{gfa}), depending on the initial state of the building and the scope of refurbishment. The equity of private households in rural regions is usually not sufficient for carrying out extensive refurbishments. Most of the refurbishment costs will therefore be financed by means of borrowed capital. Table 2 shows the borrowing potential of private households for refurbishments of their buildings depending on disposable income and the mortgage interest rate. The calculation assumes a credit period of 20 years.

Table 2. Borrowing potential for the refurbishment of buildings of private households.

	Disposable per Capita Income	Mortgage Lending Rate			
		1%/a	3%/a	5%/a	12%/a
Borrowing Potential	20,000 €/a	94,345 €	78,620 €	66,558 €	41,365 €
	21,000 €/a	96,703 €	80,585 €	68,222 €	42,399 €
	21,500 €/a	99,062 €	82,551 €	69,886 €	43,434 €
	22,000 €/a	101,421 €	84,516 €	71,550 €	44,468 €
	22,500 €/a	103,779 €	86,482 €	73,214 €	45,502 €

3.3.4. Residential Markets

In economically underdeveloped and peripheral rural regions, high population losses have led to an oversupply of residential space. Regional disparities are likely to increase further in the future [35] (p. 3). At the same time, many cities and municipalities are increasingly confronted with the dilemma that there is less demand for additional housing, but that those with purchasing power do not find a sufficient supply of high-quality housing in their housing stock. As this demand is satisfied by new housing construction, there is a growing risk of generating an oversupply in housing, i.e., vacancies in older buildings, in the longer term [26]. New development areas on greenfield sites often lead to the formation of empty and functionless centres and to significant burdens on municipal budgets from development and infrastructure costs. The needs-based adaptation can only succeed overall if the potential of the housing stock is also used to increase the diversity and quality of the housing supply [35] (p. 3).

Some existing properties have suffered significant losses in value due to the drop in demand. As a result, the owners' willingness to invest has also declined, which could lead to downward spirals. In many cases, the owners' retirement provisions are endangered as a result [36].

4. Results

Based on the theoretical framework and the results of the expert workshop, expert interviews and the literature review, the key features and mechanisms of the fund were postulated and the basic structure was elaborated. The design aspects of the fund were defined. In the following, the different aspects are discussed in detail.

4.1. Postulated Features of ARF Mechanism

Given the particular challenges of rural regions, the ARF is intended to be a locally applicable problem-specific and flexible instrument with these strategic objectives:

- The reduction of land use in rural regions, especially for residential development under the conditions of demographic change;
- Strengthening the development of the centre and the sustainable preservation of the historical building fabric; the revitalisation of the centre through mixed and new use;
- The adaptation of the settlement area to demographic development with new forms of housing and land layouts;

- The more efficient use of funding;
- The strengthening of regional cooperation and a responsible society;
- Accounting for interdependencies and synergies of spatial organisms/social systems.

The ARF is a multiplayer approach to activate changes in the housing market of rural regions that lead to a more sustainable and resistant future housing market. The target groups are municipal owners as well as private owners.

The ARF empowers municipalities to buy, qualify and finally resell vacant sites or buildings fitting their urban development strategies. Municipalities will increasingly have to play an active role to support the recovery of housing markets in rural regions. Likewise, the ARF addresses private owners as actors in housing markets. In particular, it aims to motivate or support them to invest in their property. The owners can be owner-occupiers or landlords. In both cases, the returns to the ARF can be used for new investments.

As a financing instrument, it focuses on those projects that have financing problems due to special risks or a foreseeable low project return. In particular, it can support projects that generate high urban returns but do not qualify for financing at market rates.

4.2. Essential Mechanisms of ARF

Basically, four modes are proposed:

- Mode A: The ARF buys and refurbishes a property—for example, by order of a municipality. Therefore, the ARF itself acts as a developer and resells the property. In this case, one classic and one more complex procedure can be distinguished. The regular way is sale to the ARF and resale by the ARF after refurbishment to a new owner. Another way could be that the seller keeps shares, resulting in an owner community with an ARF or, later, even in a cooperative with new owners or ARFs. As long as the ARF holds the shares it needs to be capable of acting in and maintaining the interests of the regional settlement development, this is appropriate. The sellers can reinvest their income in other ARF projects and reduce their cluster risk by the distribution of their investments. Simultaneously, the ARF offers a possibility to invest in the regional housing market and can strengthen identification with the region as a spatial organism/social system. In both cases of this mode, it must be ensured that land transfer tax is charged only once to avoid an unwanted barrier. If necessary, contractual arrangements must be adjusted in comparison to redevelopment agencies.
- Mode B: No urban development intervention/activation is needed, and the ARF acts as a creditor. In contrast to regular credit programs, the ARF can additionally assume responsibility for a refurbishment, if the financial burdens for owners are too high or owners are not rated creditworthy (e.g., due to the age of the owner). The owner repays the loan within a fixed period. The ARF secures the credit and its interest in sustainable settlement development in the region through mortgages. Problems arising through foreclosures can be avoided, and the ARF regains ownership for a fixed price.
- Mode C: The ARF acts as an active mediator—regarding usufruct right. Owners contribute their land to the ARF and thus support a sustainable densification of settlement structures [37]. The ARF promotes the vacant sites, qualifies them and reduces or eliminates encumbrances. If needed, the ARF supports future users with expert advice and know-how.
- Mode D: The ARF invests in infrastructure to increase neighborhood livability or the attractiveness of the residential location. If the hard location factors (the accessibility of work, schools, etc.) are guaranteed, these investments can lead to pull effects for new residents [38,39].

All the described modes lead to a stronger identification of owners with their region, promote investments and support the sustainable recovery of the housing market. Additionally, the ARF offers professional expertise in housing and refurbishment. The risk of the individual owner is reduced, and a higher quality of building culture is achieved.

The ARF needs a qualified overhead agency not only for overhead costs resulting from transactions but also for advice and consultation costs. These costs can be financed by profits or levies on participating municipalities.

The ARF can be understood as a “lender of last resort” for settlement development in rural region. This role must not be confused with that of a “bad bank”, since there are no distressed mortgages involved. Rather, the collaterals are usually strong and the credit risks manageable. It helps through expertise and investment to reduce settlement problems and activates ailing housing markets. In contrast to classic support programs, the ARF is able to draw profits from reselling to cover new projects and overhead costs.

Through the application of these mechanisms, the ARF generates a joint regional portfolio of buildings and sites. After refurbishment, the properties comply with requirements of actual demand concerning size or layout. The regional demand for housing can be met by existing potentials, and the new designation of greenfield development can be minimised.

4.3. Design Aspects of ARF

The following criteria will guide towards the essential design aspects of the ARF. The criteria will have to be subject to further research, and the specifications will differ between countries and regions.

4.3.1. Governance

Figure 7 shows the principal structure and governance of the ARF. The ARF will generally be structured in such a way that a committee with representatives of the relevant regional institutions will supervise the fund management (supervisory board). The governance structure can be designed in different ways, depending on national particularities.

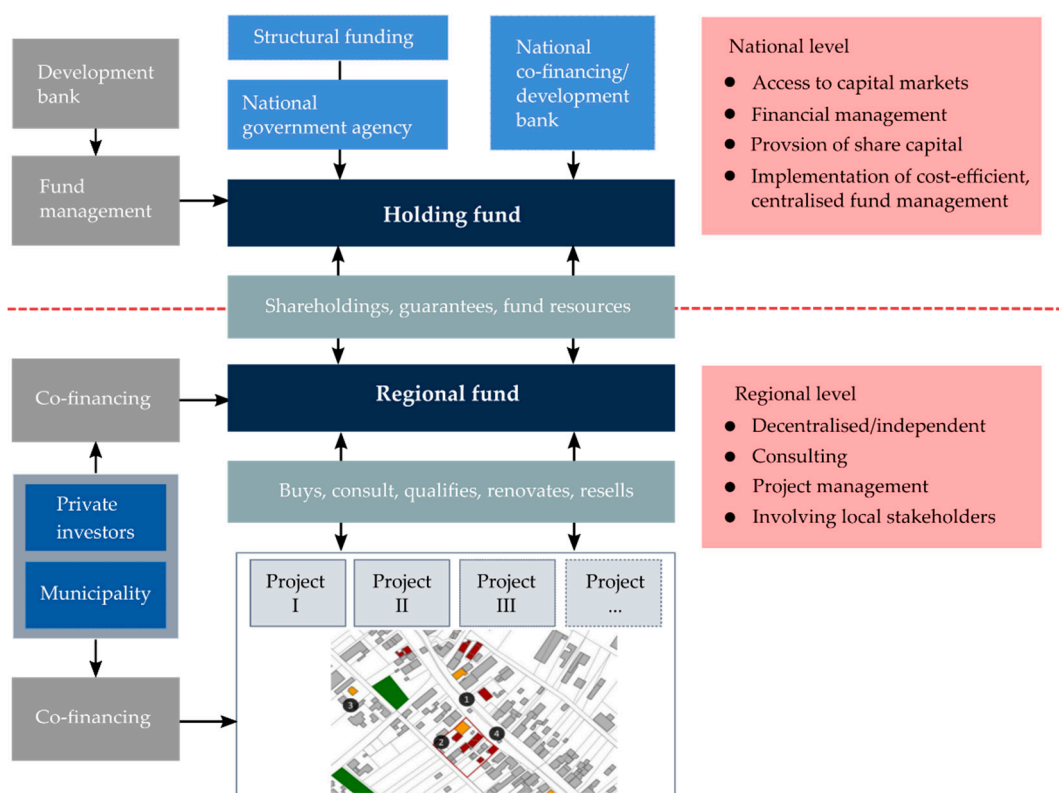


Figure 7. Structure and governance of advanced revolving housing fund (ARF) (based on [25,26]).

The ARF is proposed as a national holding fund with complementary, decentralised regional funds. It provides equity and guarantees for regional funds in order to realize projects within existing

planning and administrative structures. The decentralised approach of the regional funds is governed by the subsidiarity principle and accounts for the needs of regional stakeholders.

Co-financing for the regional funds and individual projects can be sourced from the municipalities as well as private investors (see Section 4.4). Public funding should be made available, in particular, for the capital stock of the holding fund. The fund could earn a high credit rating and thus have easy access to capital markets.

4.3.2. Eligibility

Owners can apply or be proposed as beneficiaries of the regional funds. Eligibility does not require self-occupancy of the building. Appropriate criteria relate to the location and state of the building as well as to socio-economic criteria of the building owner(s) (Figure 8). Additionally, spatial and topical priorities (e.g., old-building refurbishment, energetic refurbishment and listed buildings/monuments) could apply.

4.3.3. Communication and Incentive Schemes

Apart from financial incentive instruments, which result from ARF mechanisms and associated grants, other instruments for the successful implementation of ARF are necessary, since not only financial barriers are responsible for vacancies of buildings and sites in rural regions (Table 1). For example, target-group-specific communication and awareness-raising activities promoting inner-settlement development play an important role.

Measures to reduce prejudice against existing buildings (e.g., “old = not modern”) may lead to a redirection of housing demand for inner cities. Consultation concerning the owners’ target prices can lead to a better matching of supply and demand. Such activities are supporting factors for a sustainable implementation of ARF.

4.4. *Input Parameters and Financial Modeling of Regional Funds*

The basic information that needs to be gathered on the municipality, owner and building levels forms the basis as input parameters for the financial modelling (Figure 8). The regional funds are implemented with a given governance, structure, volume, funding, overhead and investment strategy. Investments of the regional funds go through seven phases from the assessment of basic parameters to the termination and eventual repayment of the capital to the funds.

4.4.1. Overhead and Other Costs

The overhead costs of the regional funds result mainly from fund management and consultancy services, which can be provided free of charge to building owners. In addition, financing costs for the funds may apply. The consulting services are scalable. All direct costs must be financed from the interest income of the funds. Additional public funds may be needed to cover these costs fully.

The fund management could generally be designed to be relatively lean, as central tasks such as marketing as well as legal and tax advice would be handled by the holding fund. Sourcing and sales would also be supported by the regional administration and other public bodies.

Transaction costs, in particular, land transfer tax, should only be incurred once at most, not when selling and possibly repurchasing. Thorough assessments of the legal and tax implications are essential.

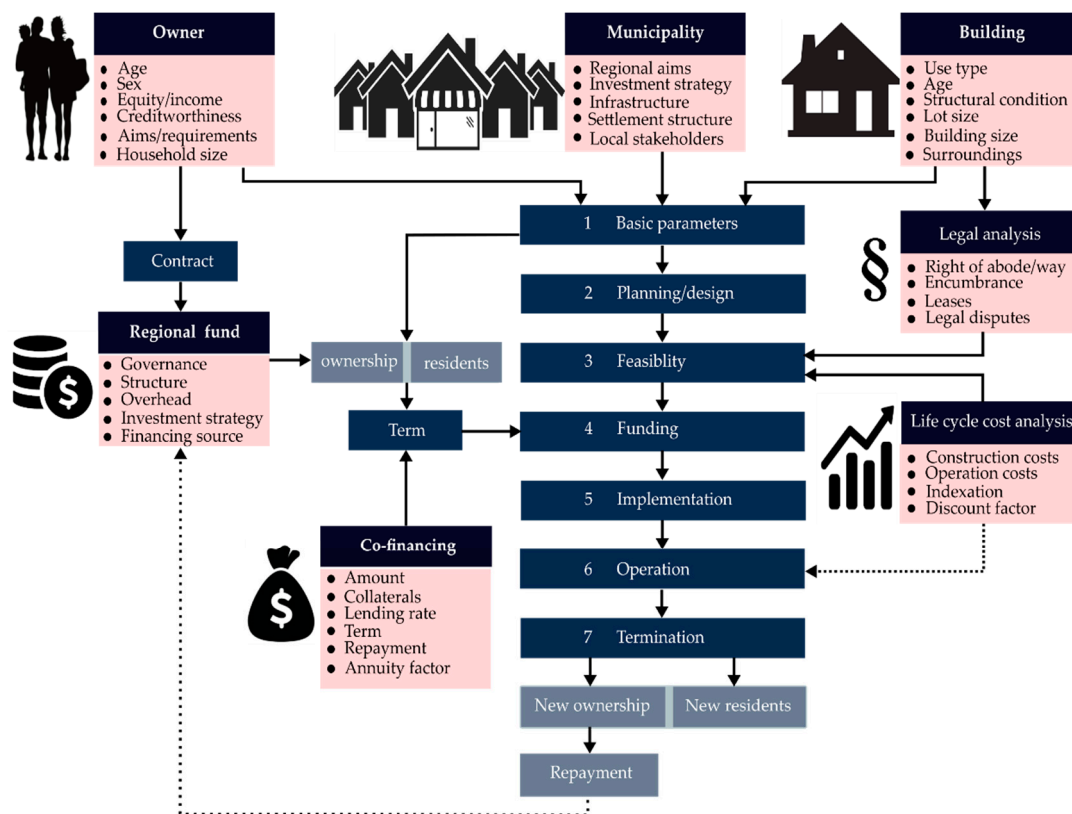


Figure 8. Regional fund parameters.

4.4.2. Financing Sources and Fund Volume

The volume of the holding fund and of the regional funds can be scaled according to the needs and capital available, including repayments by the beneficiaries. This, in fact, is one of the main benefits of the regional funds. A typical regional fund could manage 6–10 projects per year. The actual fund volumes, in particular, depend on the repayment terms, lending rates and project volumes, which will differ by region. In most European countries, a sensible lower boundary for the volume of a regional fund could be €5 million [26] (p. 25).

In particular, the regional funds can also be fed by basic private sector funding from banks/savings banks, foundations or private financing campaigns (crowdfunding). Especially with these, a locally rooted reference and interest is very often given. Private funds could be brought in through foundations or through crowd-invest and civic participation models (also, cooperatives). Private individuals and municipalities could also contribute land to the fund. Alternative sources of financing such as “citizen share companies” and “tenement syndicates” are considered rather critical regarding their transferability to rural regions. Additionally, complementary national or international sources for financing the fund could be considered. The average return on equity of the regional funds could be between 2% and 3% (depending on the general interest environment), and the assets should not be limited to residential properties [26] (p. 25).

4.4.3. Legal Parameters

Legal parameters relate to building ownership and occupancy as well as encumbrances from the land register. Moreover, there are strict municipal laws that limit direct property activities by municipalities in most countries. For example, the obligation to invite tenders for municipal property transactions and market value assessments for “problem properties” may be challenges.

Municipal bidders are often bound by fixed specifications in the case of compulsory auctions. Additionally, rules relating to the award of subsidies in federal-state programs are opposed to projects

if, for example, regional craft enterprises want to bring in their own share in the form of contributed work [26] (p. 19).

4.4.4. Revolving Part, Interest Rate, Repayment Periods and Fund Term

Beneficiaries of the regional funds should make continuous repayments, optionally after an initial suspension, which should be limited to a maximum of two years. Repayments to the funds should then be made continuously in the same way as for repaying a mortgage.

The interest rate must cover the refinancing costs of the regional funds and will thus depend on the financing sources and the general capital market conditions. The interest rate could be fixed or variable. In the latter case, the beneficiaries of the fund would bear the interest rate risk. The regional funds can be tailored to the specific situations in regions and of buildings owners. It seems sensible that different variants be offered for distinct target groups. Clearly, the conditions will vary between individual cases by the basic parameters as set out in Figure 8. However, the system as a whole must remain easy to grasp and balanced for all potential stakeholders.

The fund term of the regional funds could be unlimited but should at least be 15 years. Given this, building owners have sufficient planning certainty and the regional governments and administration can pursue longer term goals. The longer the term of the regional funds, the more sustainable and lasting the achieved effects will be. The revolving part, interest rate and period for repayments are crucial as incentive instruments for encouraging building owners to make use of the funds. The exact calibration of the conditions will depend on the general economy, the regional aims and strategies, and the regional economy and building stock. This will require more research, which should also be shared and taken into consideration by subsequent projects.

5. Discussion

5.1. Findings and Implications

In order to preserve the future viability of rural regions, the course must be set at an early stage for dealing with predictable challenges and making use of existing potential. A financing solution alone is not enough for sustainable settlement development in rural regions.

Rather, the ARF must be a comprehensive instrument of settlement development for rural regions with additional informal and formal measures. It intends to bring together several new approaches to settlement development:

- The ARF is to have a regional focus. This is a novelty for spatial development but is necessary, especially for intelligent rural regions. For example, the housing needs in rural regions are usually not locally but regionally oriented [40]. The regional orientation also helps to avoid intraregional competition for those willing to build. In order to be able to deal with individual factors, which can vary from region to region, the ARF should also not have a supra-regional orientation. Regional funds can be governed by a holding fund.
- Another novelty is that the ARF no longer has a sectoral approach. It can invest in buildings of any use type as well as in surroundings and infrastructure.
- The ARF combines public and private capital from owners and other, in particular, locally rooted, investors and stakeholders.
- The revolving principle offers the possibility of empowering settlement development through reflexes of funds with a permanent—or at least long-lasting—instrument that sustainably increases communities' scope for action.

- The ARF strategy or basis for action should not, as in the past, be based on defined measures or bundles of measures in a firmly defined area. Rather, regional funds could be established in all possible regions, each with their own characteristics. Furthermore, it is not subject to a specific funding program or funding logic. This differentiates the concept from common action-based funding. Previous approaches, at least in Europe, were always tailored to model regions. The ARF is designed as a general model.
- The ARF enables the value preservation of existing building substance and promotes building culture as well as energetic refurbishments. It contributes to affordable housing in rural regions.
- The ARF strengthens regional economies and crafts. The approach and the supporting structures strengthen the municipalities and regional cooperation, since the municipalities are permanently involved not only in setting and developing priorities but also in applying and implementing the instrument.

In order to limit the potential deadweight loss effects of municipalities and building owners, appropriate rules must be established [41]. Competent and independent bodies that are oriented towards the common good should prioritise the use of resources.

It is obvious that the ARF must be conceived as a learning institution. This should be included as a guiding principle in the management of the holding fund and the regional funds. Moreover, the ARF mechanisms presented in this research need to be fine-tuned to national particularities, and available grants, as financial incentive instruments, need to eventually be revised.

5.2. Need for Ongoing Research

The concept should be researched further, in particular, by means of case studies in pioneering regions as set out in the previous section. The research could investigate focus groups and conduct experiments on decision situations for politics, administration and owner groups. Although only little research could be found on incentive schemes for settlement development in other countries, it is assumed that many countries and regions will face the same or similar problems regarding the sustainable development of rural regions. Ideally, ongoing research should be performed in one or more international research projects to benefit from synergies and knowledge transfer. Additionally, intercultural differences in the underlying decision processes could be researched and highlighted in an international approach. This would offer the opportunity to identify influence factors for the successful development and implementation of proven configurations and variants.

Further to the research questions addressed in this paper, the following should be instrumental for ongoing research. The results may differ between countries or even regions:

- Is a minimum size for regions required to introduce the ARF?
- What is the distribution of tasks, and which decision-making and consultative bodies within the supporting structure(s) are necessary?
- What professional support for the technical/organisational processing of the fund may be necessary?
- How should buildings and land in regional funds be managed?
- Which property types should the fund primarily address (differentiation from the free property market)?
- To what extent are temporary interim uses possible for buildings and land in regional funds?
- How can processes and modes of operation for the ARF be meaningfully operationalised?
- What are the potential economic, social and ecological impacts of the ARF in rural regions?

6. Conclusions

In order to face the challenges of settlement development in rural regions, it is necessary to explore new means. To date, the effectiveness of economic instruments has been limited. Financing solutions alone are usually not sufficient for sustainable settlement development in rural regions. Rather, New Institutional Economics and the findings from this paper suggest that integrated measures are needed that combine financial incentive instruments with targeted informal and formal advisory measures. The measures need to be appropriate for the respective spatial organism or social system.

Therefore, in this paper, the concept of an advanced revolving housing fund (ARF) was derived. Revolving funds are particularly well suited as instruments for rural regions since they enable local authorities to cover the considerable refinancing and financing requirements for the necessary interim acquisition of land, the provision of land, the reorganisation and clearance of land, innovative planning procedures and intensive individual consultations [5]. In Europe, revolving funds in urban development were already introduced in 2007 under the JESSICA initiative. However, the experience gained there has revealed potential for improvement, as shown by the documentation of expert workshops, interviews and discussions, which was considered in the features, mechanisms and design aspects of ARFs.

The basic concept of the ARF suggests the creation of a national holding fund with complementary, decentralized regional funds. The national holding fund provides equity capital and guarantees for regional funds in order to implement projects within the existing planning and management structures. The decentralized approach of the regional funds is in accordance with the principle of subsidiarity and considers the needs of regional actors. The ARF should have a regional focus and must be a comprehensive instrument of settlement development with additional informal and formal measures. In this way, targeted measures can be developed that counteract local barriers to sustainable settlement development and contribute to maintaining the value of the local building fabric. The approach and the supporting structures of the respective regional fund should also strengthen local cooperation, as the municipalities are permanently involved not only in setting and developing priorities but also in the application and implementation of the instrument. Overall, the ARF is designed as a learning instrument. The fund should be continuously developed further based on local experience.

The developed concept promises new impulses, in particular, for rural regions. However, since only little research is available, in particular, with regard to other countries, further research is needed to ensure that it can be applied internationally in practice. The fund concept should be tested by means of case studies in pioneer regions of different countries.

Author Contributions: Conceptualisation, N.-M.W. and B.-M.K.; methodology, N.-M.W. and B.-M.K.; validation, B.-M.K. and P.R.; formal analysis, N.-M.W. and P.R.; investigation, N.-M.W. and P.R.; resources, B.-M.K.; writing—original draft preparation, N.-M.W. and P.R.; writing—review and editing, B.-M.K.; visualisation, N.-M.W.; supervision, B.-M.K.; project administration, N.-M.W. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Appendix A

Table A1. Existing funds in Europe.

Country/City	Targets and Measures	Level of Funding	Financing Source	Allocation
Netherlands/ Den Haag (FED; ED)	(a) Promotion of energy efficiency (b) Urban development projects	(a) EUR 4 m (b) EUR 4 m	-	Credits below market level
Portugal/Porto (REENERGI.CHP)	Promotion of urban (and energy) renovation in the historic city centre	EUR 40 m	-	Mix of credits and grants
UK/Manchester (Evergreen Fund)	Revitalisation of properties and areas for commercial development	GBP 60 m	-	Credits below and at market level
Poland/Posen (Wielkopolska Fund)	Real estate development and refurbishment in the commercial and office space segment, depending on social impact	EUR 66 m	EUR 51 m ERDF resources, EUR 15 m public co-financing	Credits below the market level determined according to social criteria
Latvia/Riga (state-owned fund)	Improving energy efficiency in buildings	EUR 40 m	EUR 30 m ERDF resources, EUR 4 m from City of Riga	Credits below the market level, discounts if targets are achieved, supplemented by grants
Spain/Sevilla (AC JESSICA)	Urban development projects	EUR 40 m	ERDF and funding of the BBVA (Spanish credit institution)	Credits below market level and equity participation

Appendix B

List of participants of the expert workshop:

- Gerd Bauer Director of Housing Promotion, Thüringer Aufbaubank, Erfurt in Thuringia
- Frank Baumgarten Managing Director, Stiftung Landleben, Kirchheilingen in Thuringia
- Joachim Bleeck President, State Association Thuringia House, Dwelling and Grounds Owners, Rudolstadt in Thuringia
- Petra Enders County Commissioner, Ilm-Kreis, Arnstadt in Thuringia
- Andreas Jacob Managing Director, FIRU mbH, Kaiserslautern in Rhineland-Palatinate
- Thomas Klepel Head of Nature Park Dübener Heide, Bad Dübén in Saxony
- Andre Knapp Department Head, Rhön-Rennsteig-Sparkasse, Meiningen in Thuringia
- Ulrich Kurtz Mayor, Steinach, Steinach in Thuringia
- Florian Langguth Manager, SPRINT—wissenschaftliche Politikberatung, Darmstadt in Hesse
- Christian Löffelholz Thuringia Ministry for Infrastructure and Agriculture (TMIL), Erfurt in Thuringia
- Rolf Novy-Huy Head of Stiftung trias, Hattingen in North Rhine-Westphalia
- Dr. Annelie Reiter Authority for Agriculture and the Reorganisation of Land (ALF), Meiningen in Thuringia
- Prof. Stefan Rettich Professor at School of Architecture/University Bremen, Member of the Advisory Council IBA Thuringia

- Ulla Schauber Managing Director, Stadtstrategen, Weimar in Thuringia
- Johann Scheiblhuber Branch Manager, Deutsche Kreditbank, Erfurt in Thuringia
- Udo Schilling Vice County Commissioner, Wartburgkreis, Bad Salzungen in Thuringia
- Prof. Martin zur Nedden Head of Deutsches Institut für Urbanistik (DIFU), Berlin

Further information on the results of the workshop can be found in [26].

References

1. Leimgruber, W.; Chang, C.D. Rural Areas Between Regional Needs and Global Challenges. In *Transformation in Rural Space*, 4th ed.; Springer International Publishing: Cham, Germany, 2019.
2. Tang, C.; He, Y.; Zhou, G.; Zeng, S.; Xiao, L. Optimizing the spatial organization of rural settlements based on life quality. *J. Geogr. Sci.* **2018**, *28*, 685–704. [CrossRef]
3. Larina, T.; Kibataeva, A. Housing market in rural areas of Russia: Developmental factors and problems of study. *IOP Conf. Ser. Earth Environ. Sci.* **2019**, *341*, 012028. [CrossRef]
4. Beer, A. The Drivers of Supply and Demand in Australia's Rural and Regional Centres. 2011. Available online: <https://core.ac.uk/download/pdf/30681445.pdf> (accessed on 31 August 2020).
5. Kötter, T.; Linke, H.J. Vom Wachstum zur Schrumpfung—Ein Beitrag zum neuen Planungsverständnis für Städte und Dörfer im demografischen Wandel. *Zfz Z. Geodäsie Geoinf. Landmanag.* **2013**, *2013*, 38–46.
6. Jacob, A. Stadtentwicklungsfonds im Rahmen der JESSICA-Initiative; BMVBS-Online-Publikation. 2011. Available online: https://www.bbsr.bund.de/BBSR/DE/veroeffentlichungen/ministerien/bmvbs/bmvbs-online/2011/DL_ON142011.pdf?__blob=publicationFile&v=2 (accessed on 31 August 2020).
7. Siebert, R. Social Change and Trends in Rural Areas. In *Agricultural Transformation and Land Use in Central and Eastern Europe*; Goetz, S.J., Jaksch, T., Eds.; Routledge: Milton, UK, 2018; pp. 56–69.
8. Mensing, K. Revitalisierung des Immobilienbestandes in Klein- und Mittelstädten durch einen revolvierenden Stadtentwicklungsfonds. In *Stadtentwicklungsfonds. Ein Neues Instrument zur Unterstützung Nachhaltiger Stadtentwicklung?* Nischwitz, G., Andreas, V., Eds.; Akademie für Raumforschung und Landesplanung: Hannover, Germany, 2019; pp. 123–135.
9. Schleiter, L.-W. *Historische, Gesellschaftliche und Ökonomische Grundlagen der Immobilien-Projektentwicklung oder Staats-, Stadt- und Immobilienentwicklung*; Müller: Köln, Germany, 2000; pp. 329–330. ISBN 978-3932687549.
10. Luhmann, N. *Social Systems*; Stanford University Press: Stanford, CA, USA, 1995; ISBN 978-0804726252.
11. Richter, R. *Essays on New Institutional Economics*; Springer International Publishing: Cham, Switzerland, 2015; pp. 1–15. ISBN 978-3319141541.
12. Ménard, C.; Shirley, M.M. *Handbook of New Institutional Economics*; Springer: Berlin/Heidelberg, Germany, 2008; pp. 21–69. ISBN 978-3540776604.
13. Voigt, S. *Institutional Economics. An Introduction*; Cambridge University Press: Cambridge, UK, 2019; pp. 5–37. ISBN 978-1108473248.
14. Thaler, R.H.; Sunstein, C.R. *Nudge. Improving Decisions about Health, Wealth, and Happiness*; Yale Univ. Press: New Haven, Connecticut, 2008; pp. 1–81. ISBN 978-0143115267.
15. Kahneman, D. *Thinking, Fast and Slow*; Penguin Books: London, UK, 2012; pp. 109–199. ISBN 978-0141033570.
16. Achtnicht, M.; Madlener, R. *Factors Influencing German House Owners' Preferences on Energy Retrofits*; ZEW, Zentrum für Europ. Wirtschaftsforschung: Mannheim, Germany, 2012; pp. 8–18.
17. Abreu, M.I.; Oliveira, R.; Lopes, J. Attitudes and Practices of Homeowners in the Decision-making Process for Building Energy Renovation. *Procedia Eng.* **2017**, *172*, 52–59. [CrossRef]
18. Stieß, I. Handlungsmotive, -Hemmnisse und Zielgruppen für eine Energetische Gebäudesanierung: Ergebnisse einer standardisierten Befragung von Eigenheimsanierern. Available online: <https://edocs.tib.eu/files/e01fb10/625755685.pdf> (accessed on 20 August 2020).
19. Klöckner, C.A.; Nayum, A. Specific Barriers and Drivers in Different Stages of Decision-Making about Energy Efficiency Upgrades in Private Homes. *Front. Psychol.* **2016**, *7*, 1362. [CrossRef] [PubMed]
20. Renz, I.; Hacke, U. The multi-dimensionality of decisions on energetic refurbishment: Results of a qualitative study covering different types of property owners. In *Proceedings of the EECE 2017 Summer Study on Energy Efficiency*, Presqu'île de Giens, France, 29 May–3 June 2017; pp. 2043–2052.

21. Beillan, V. Barriers and drivers to energy-efficient renovation in the residential sector. Empirical findings from five European countries. In *Energy Efficiency First: The Foundation of a Low-Carbon Society: ECEEE 2011 Summer Study, Proceedings of the Conference Proceedings, Belambra Presqu'île de Giens, France, 6–11 June 2011*; Lindström, T., Ed.; ECEEE: Stockholm, Sweden, 2011; pp. 1083–1094.
22. Stieß, I.; Dunkelberg, E. Objectives, barriers and occasions for energy efficient refurbishment by private homeowners. *J. Clean. Prod.* **2013**, *48*, 250–259. [[CrossRef](#)]
23. Nischwitz, G.; Andreas, V. Stadtentwicklungsfonds. Ein neues Instrument zur Unterstützung nachhaltiger Stadtentwicklung? Einführung. In *Stadtentwicklungsfonds. Ein Neues Instrument zur Unterstützung Nachhaltiger Stadtentwicklung?* Nischwitz, G., Andreas, V., Eds.; Akademie für Raumforschung und Landesplanung: Hannover, Germany, 2019; pp. 3–16.
24. Bötzel, A. Evaluation RWB-EFRE 2007–2013. In *Thematische Studie zur Konzeption Neuer Finanzierungsinstrumente*; Rambøll Management Consulting GmbH: Berlin, Germany, 2013; pp. 5–10.
25. Jacob, A. *Stadtentwicklungsfonds in Deutschland*; ExWoSt-Informationen; BBSR: Bonn, Germany, 2011; pp. 9–11.
26. IPU. Revolvierender Siedlungsfonds. In *Dokumentation IBA Werkstatt Revolvierender Siedlungsfonds*; Internationale Bauausstellung Thüringen: Apolda, Germany, 2016; pp. 8–26.
27. Franzen, N.; Hahne, U.; Hartz, A.; Kühne, O.; Schafranski, F.; Spellerberg, A.; Zeck, H. *Herausforderung Vielfalt—Ländliche Räume im Struktur- und Politikwandel*; Akad. Für Raumforschung und Landesplanung: Hannover, Germany, 2008; pp. 1–9.
28. Eurostat. Urban-Rural Typology, by NUTS 3. Available online: https://ec.europa.eu/eurostat/cache/RCI/#?vis=urbanrural.urb_typology&lang=en (accessed on 1 September 2020).
29. Destatis. Census. 2011. Available online: <https://ergebnisse.zensus2011.de/?locale=en> (accessed on 18 August 2020).
30. Infoportal Zukunft.Land. Anteil Ein- und Zweifamilienhäuser. Available online: www.landatlas.de/wohnen/ein_zwei.html (accessed on 1 September 2020).
31. Infoportal Zukunft.Land. Anteil Wohnungsleerstand. Available online: www.landatlas.de/wohnen/leerstand.html (accessed on 1 September 2020).
32. Maretzke, S. Regionale Disparitäten des Einkommens in Deutschland. In *Armut im Ländlichen Raum? Analysen und Initiativen zu einem Tabu-Thema*; Hanns-Seidel-Stiftung: München, Germany, 2015; pp. 19–40.
33. Statistisches Landesamt Baden-Württemberg. Verfügbares Einkommen Privater Haushalte. Available online: <https://www.statistik-bw.de/VGRdL/tbls/R0B0.jsp?tbl=R2B3> (accessed on 18 August 2020).
34. Bouzarovski, S.; Petrova, S. A global perspective on domestic energy deprivation: Overcoming the energy poverty—fuel poverty binary. *Energy Res. Soc. Sci.* **2015**, *10*, 31–40. [[CrossRef](#)]
35. Rohr-Zänker, R. *Wohnungsmärkte im Wandel*; Bertelsmann Stiftung: Hannover, Germany, 2014; pp. 2–7.
36. Westermeier, C.; Grabka, M.M. *Zunehmende Polarisierung der Immobilienpreise in Deutschland bis 2030*; DIW-Wochenbericht: Berlin, Germany, 2017; pp. 451–459.
37. Patti, D.; Polyak, L. Funding the Cooperative City. Community Finance and the Economy of Civic Spaces. 2017. Available online: https://www.stiftung-trias.de/fileadmin/media/publikationen/2017_trias_Funding-the-Cooperative-City.pdf (accessed on 27 August 2020).
38. Roberts, B.H. Rural Urbanization and the Development of Small and Intermediate Towns. *Reg. Dev. Dialogue* **2014**, *35*, 1–23.
39. Crow, H. *Factors Influencing Rural Migration Decisions in Scotland: An Analysis of the Evidence*; Scottish Government Social Research: Edinburgh, UK, 2010; pp. 18–35.
40. Rowley, S. Housing market dynamics in rural and regional Australia. In Proceedings of the 18th Annual Pacific Rim Real Estate Society Conference, Adelaide, Australia, 15–18 January 2012.
41. Leßmann, C.; Schirwitz, B. Revolvierende Fonds als Instrument zur Neuausrichtung der Förderpolitik. In *ifo Dresden Berichtet*; ifo Dresden: Dresden, Germany, 2008; pp. 11–18.

Publisher’s Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



© 2020 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<http://creativecommons.org/licenses/by/4.0/>).