



Housing cooperatives facing the energy transition.

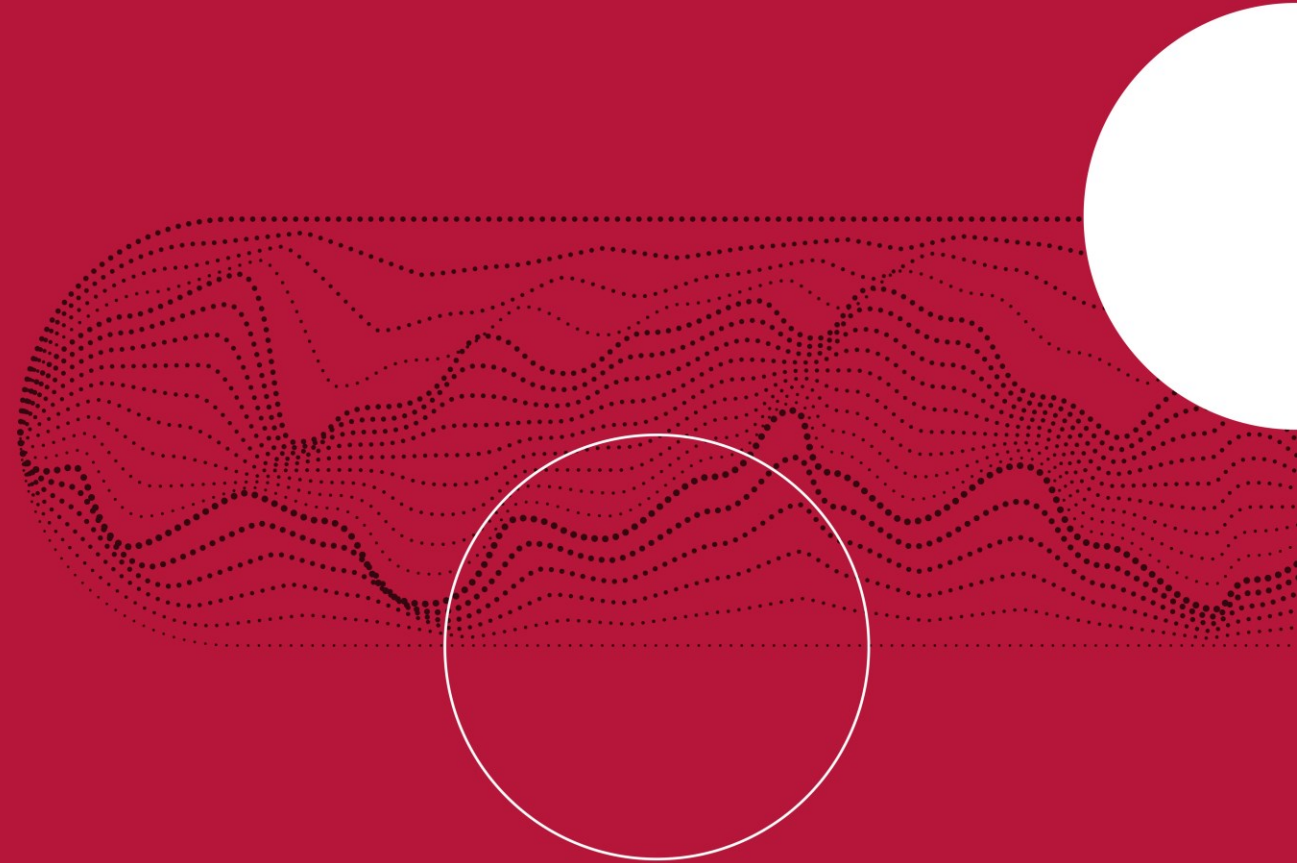
Insights from Poland and Czechia

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Introduction



Project ENBLOC: ENaBLing energy transition in postsocialist hOusing Cooperatives. | :

What role do housing institutions play in accommodating energy transition, and how can HCs serve as agents of change?

Project goals

- preparing the database and typology of HCs in both countries
- comparing the internal/external policies of HCs
- assessing the HC's readiness to engage in the energy transition

Contribution

- organising knowledge about HCs in PL and CZ
- measuring added value from cooperativeness in energy transition
- evaluating the retrofit effectiveness for HCs inhabitants
- demonstrating registry data application in housing studies



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Polish registry data in our disposal



Ministry of Finance

NIP (taxpayer ID),
REGON (employer ID),
KRS (National Court Register), address, legal form, date of establishment, VAT taxpayer status



National Office Business Register

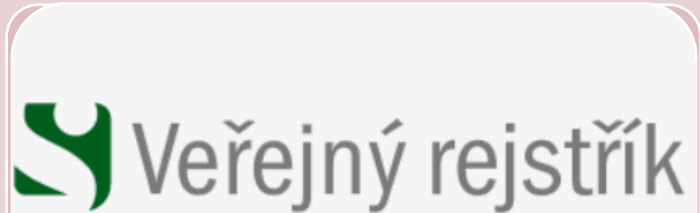
NIP, REGON (employer ID),
KRS (National Court Register ID), address, legal form, date of establishment, date of registration, business activity



National Register Court

annual financial report + reports about activities of the cooperative board

Czech registry data in our disposal



IS ReD

Verejny rejstrik

NIP (taxpayer ID),
REGON (employer ID),
KRS (National Court Register)
address, legal form, date of
establishment, VAT taxpayer
status

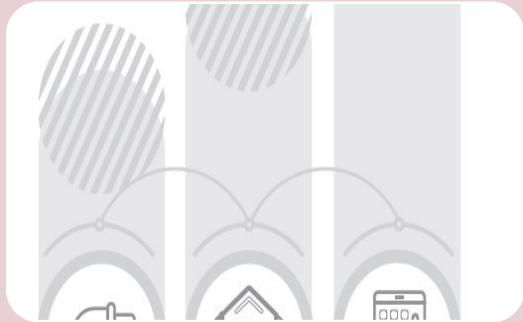
Including Register of Business Entities

annual financial report +
reports about activities of the
cooperative board, date of
establishment, date of
registration, business activity

Register of Subventions

Beneficiaries, subvention title,
granted amount

Energy-related data about housing cooperatives in our disposal



Household Budget
Surveys (Statistics
PL, Statistics CZ)



White certificates
registry
(Energy
Regulatory Office)



Profit and loss
accounts +
information about
the state aid
(National Court
Register)



Data about EU
energy projects
implemented by
HCs (Ministry of
Development
Funds and
Regional Policy)



Initial results

Statistical insight into housing
cooperatives in Poland and Czechia

Polish and Czech housing cooperatives vary from each other

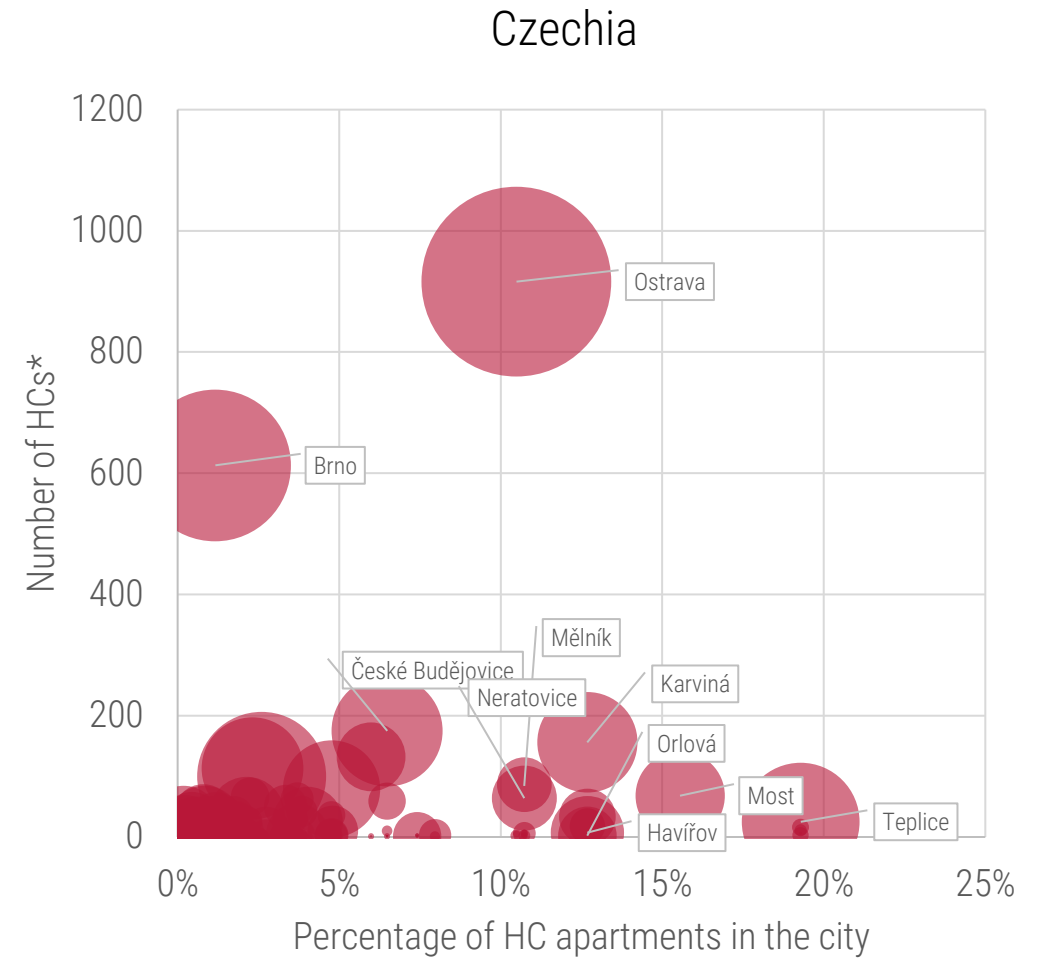
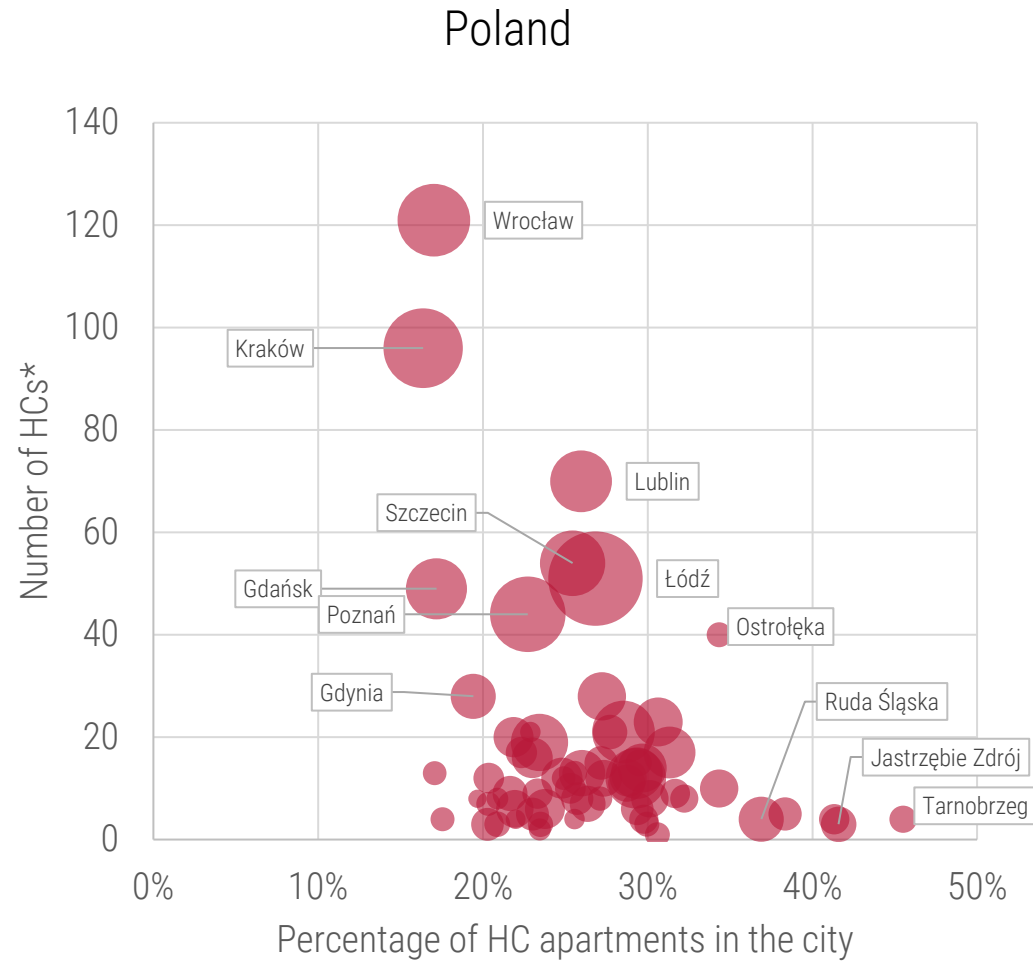


Criteria	Poland	Czechia
Active entities	3946 → 3436*	7775
% of all apartments	15% (2.3 million)	3% (0.14 million)
Location	81% – urban 19% – rural	96% – urban 4% – rural
Age	47% registered before 1989	97% (re-)registered after 1989
Size	<p>1M 10M 50M PLN annual rev.</p> <p>51% 31% 14% 4%</p> <p>micro small medium large</p>	<p>96% 5M 60M CZK annual rev.</p> <p>3,7% 0,3%</p> <p>micro small medium</p>

* Note: after the removal of all entities that have been deleted, are in bankruptcy, liquidation or suspension.

Source: own elaboration based on Polish and Czech administrative data.

Housing cooperatives in Poland are large, but there are few of them; in Czechia, they are small, but there are many



Note: Warsaw and Prague were excluded from the figures.

Source: own elaboration based on Polish and Czech administrative data and National Census 2021.

Polish housing cooperative landscape is very diversified



Housing Cooperatives

Location

- urban
- rural

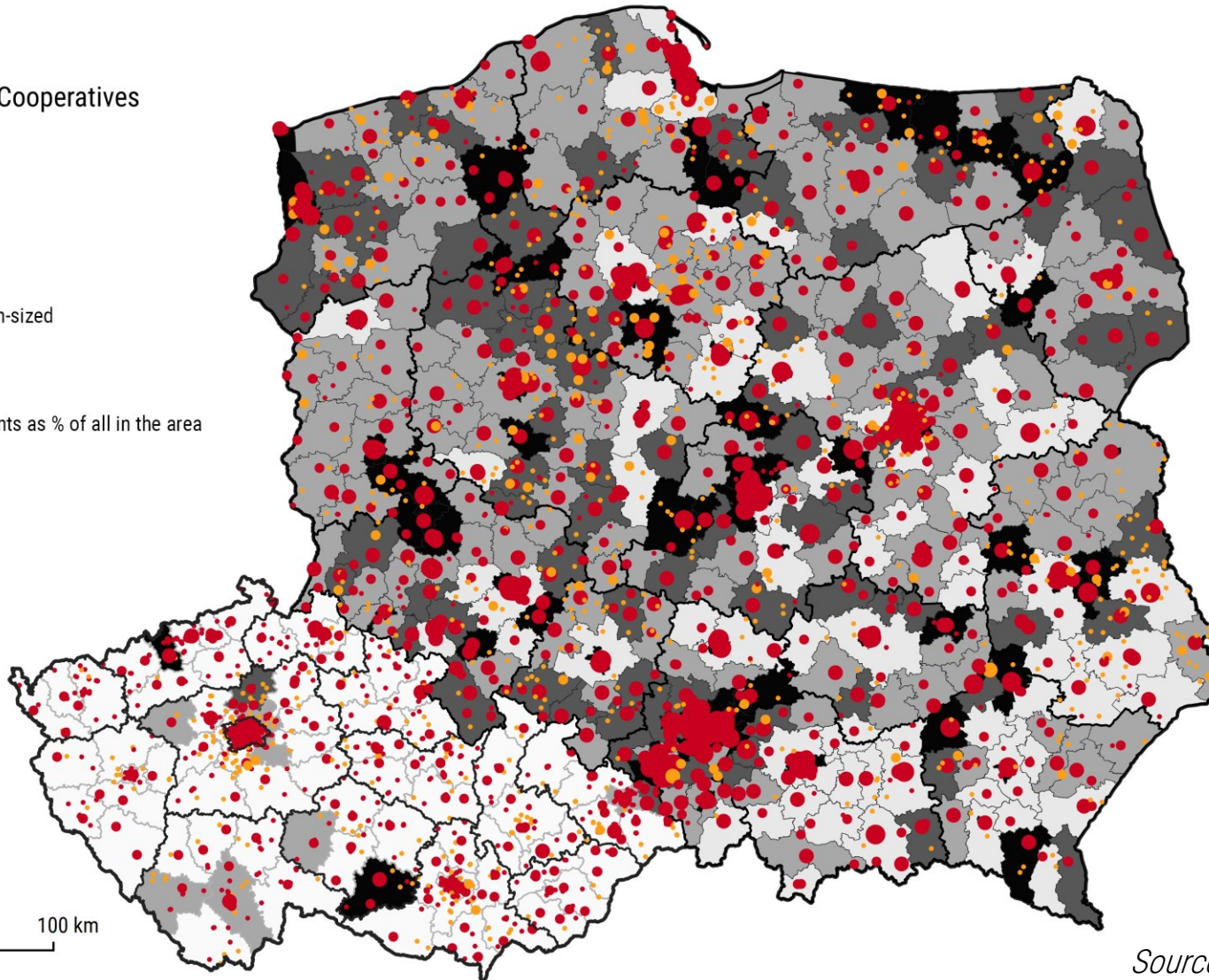
Size

- large
- medium-sized
- small
- micro

HC apartments as % of all in the area

- 15 - 46
- 10 - 15
- 5 - 10
- 0 - 5

0 100 km



- Warsaw is the place with the highest number of cooperatives.
- HCs in medium-sized cities likely experienced significant ownership divisions in the post-socialist period.
- The exception is mining towns.
- Polish-specific rural housing cooperatives with three main types:
 - suburban estates,
 - industrial-based estates,
 - post-collective farming blocks (34% of rural HCs in PL).

Source: own elaboration based on Polish and Czech administrative data.

In the Czech Republic, a much smaller share of people lives in housing cooperatives compared to Poland

Housing Cooperatives

Location

- urban
- rural

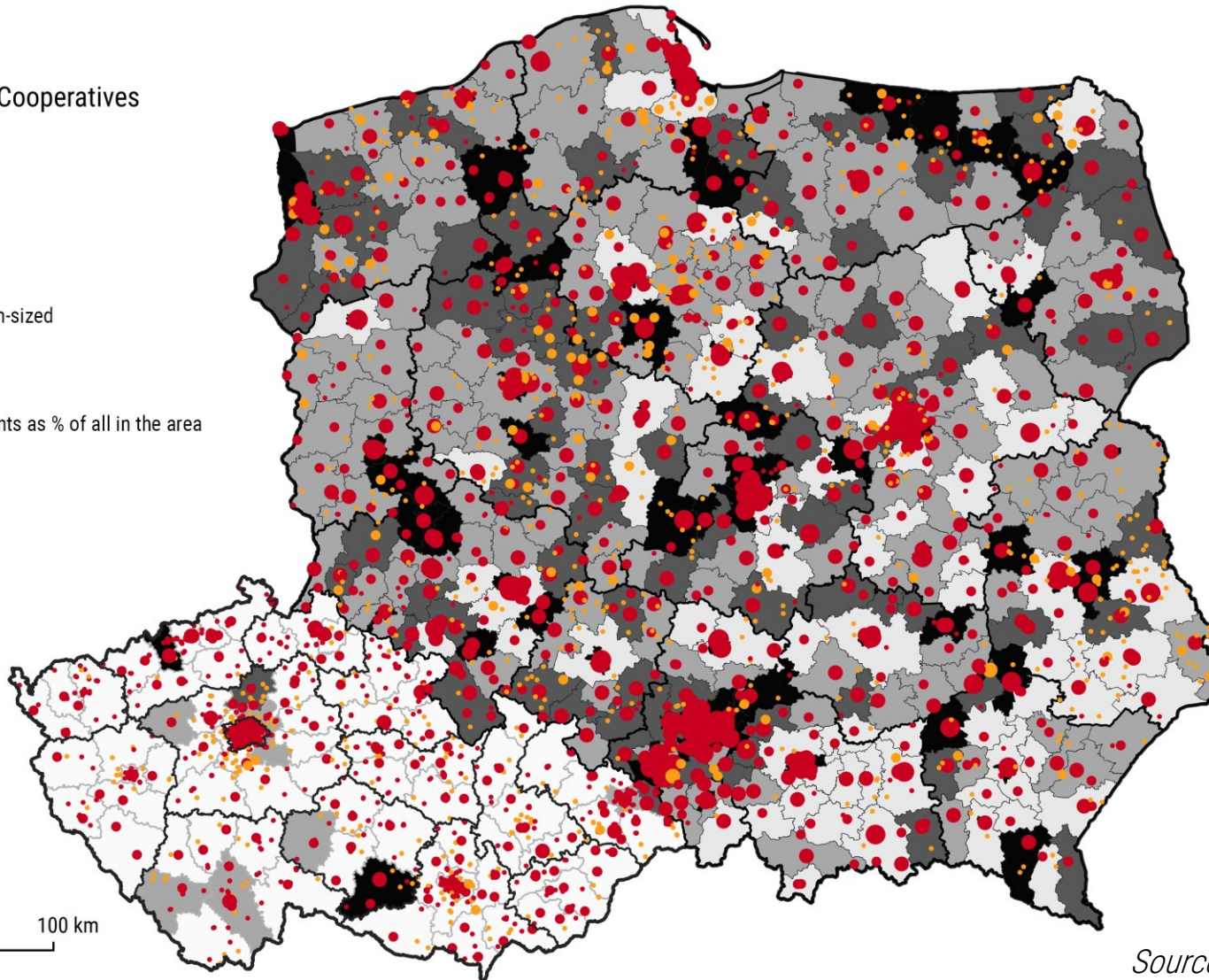
Size

- large
- medium-sized
- small
- micro

HC apartments as % of all in the area

- 15 - 46
- 10 - 15
- 5 - 10
- 0 - 5

0 100 km



- In Czechia, micro HCs dominate.
- A large number of HCs concentrate a small % of housing stock.
- The highest number of HCs is in Prague, followed by post-industrial Ostrava, and the second largest city, Brno, ranked 3.
- The highest concentration of housing stock in co-ops is observed in medium-sized post-industrial cities, e.g. Teplice, Most, Karviná, Havířov, Orlová.

Source: own elaboration based on Polish and Czech administrative data.

Five out of ten largest Polish housing cooperatives are located in Warsaw



LP	Housing cooperative	City	Annual revenues (M PLN)	Number of housing cooperative members
1	SM "Osiedle Młodych"	Poznań	294	37,820
2	RSM Praga	Warsaw	204	19,198
3	Katowicka SM	Katowice	199	18,784
4	WSM	Warsaw	198	33,517
5	SM Bródno		188	26,321
6	MSM "Energetyka"		172	21,064
7	SM "Dąb"	Szczecin	148	20,475
8	PSM "Winogrody"	Poznań	144	20,401
9	SM Wola	Warsaw	141	13,262
10	Rzeszowska SM	Rzeszów	131	19,920

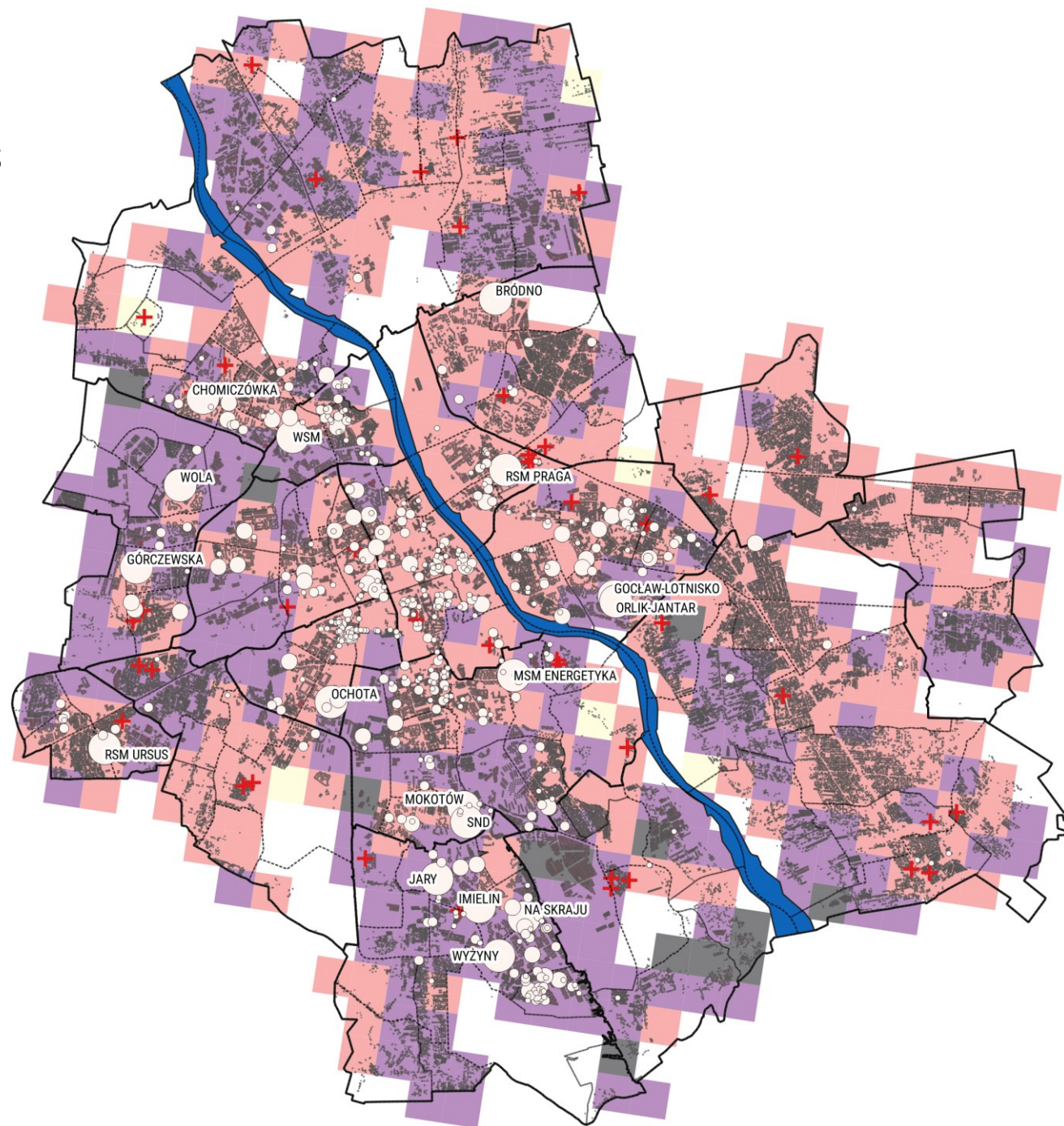
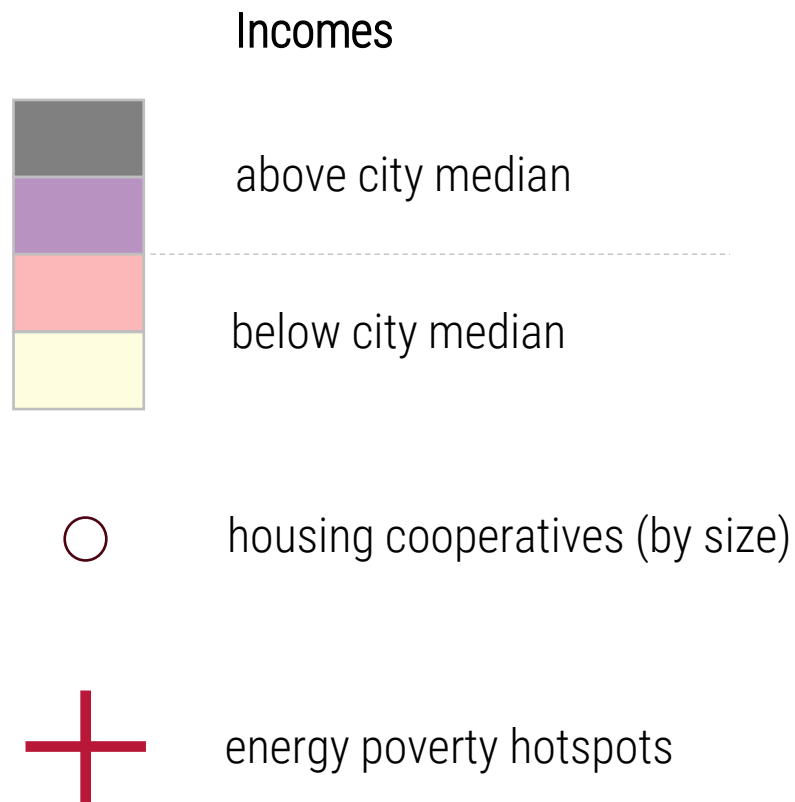
Source: own elaboration based on Polish administrative data.

Only four Czech housing cooperatives report revenues exceeding 100 million CZK . | :

LP	Housing cooperative	City	Annual revenues (M CZK)
1-4	Stavební bytové družstvo Hradec Králové	Hradec Králové	100-199
	Oblastní stavební bytové družstvo Kopřivnice	Kopřivnice	
	Stavební bytové družstvo Praha	Prague	
	Stavební bytové družstvo POKROK		
5-14	Stavební bytové družstvo Přerov	Přerov	60-99
	Stavební bytové družstvo Náchod	Náchod	
	Stavební bytové družstvo Havířov	Havířov	
	Stavební bytové družstvo LIAZ	Jablonec nad Nisou	
	Stavební bytové družstvo České Budějovice	České Budějovice	
	Okresní stavební bytové družstvo Teplice	Teplice	
	Stavební bytové družstvo SEVER	Liberec	
	Stavební bytové družstvo Třebíč	Třebíč	
	Stavební bytové družstvo Krušnohor	Most	
	Stavební bytové družstvo Ocelář	Kladno	

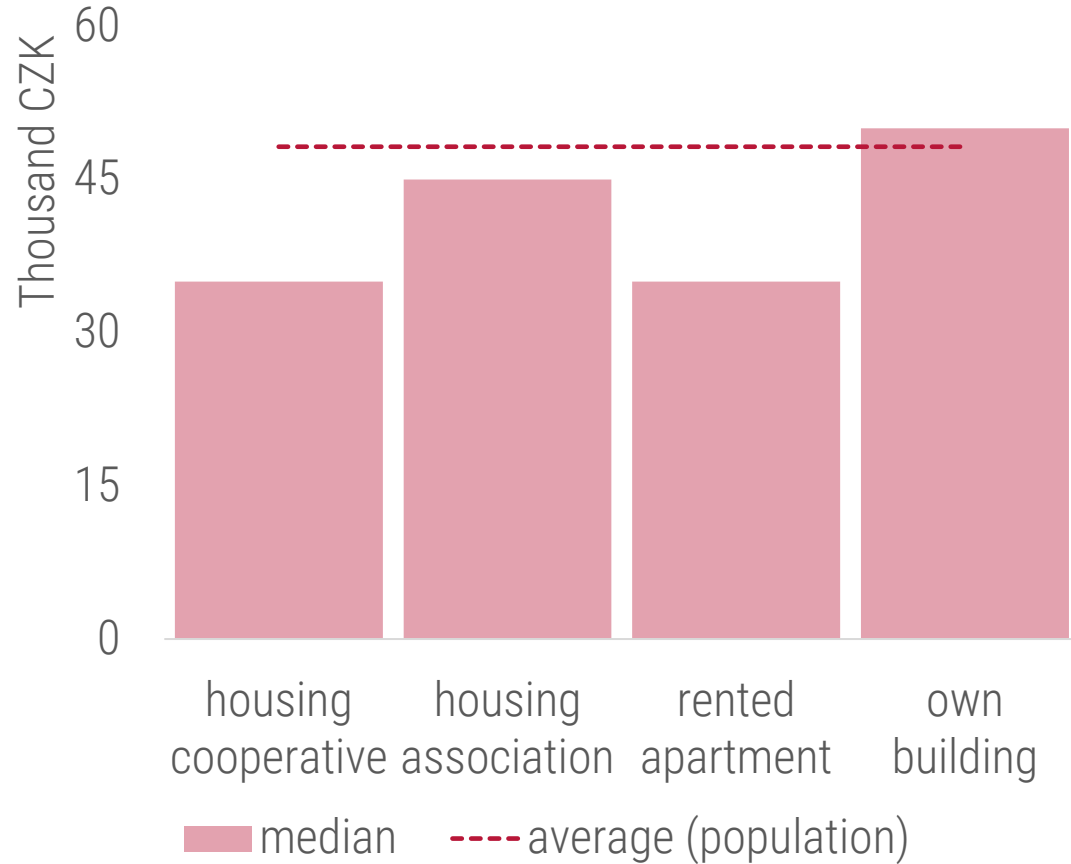
Source: own elaboration based on Czech administrative data.

Housing cooperatives in Warsaw are middle-income areas with low inequalities



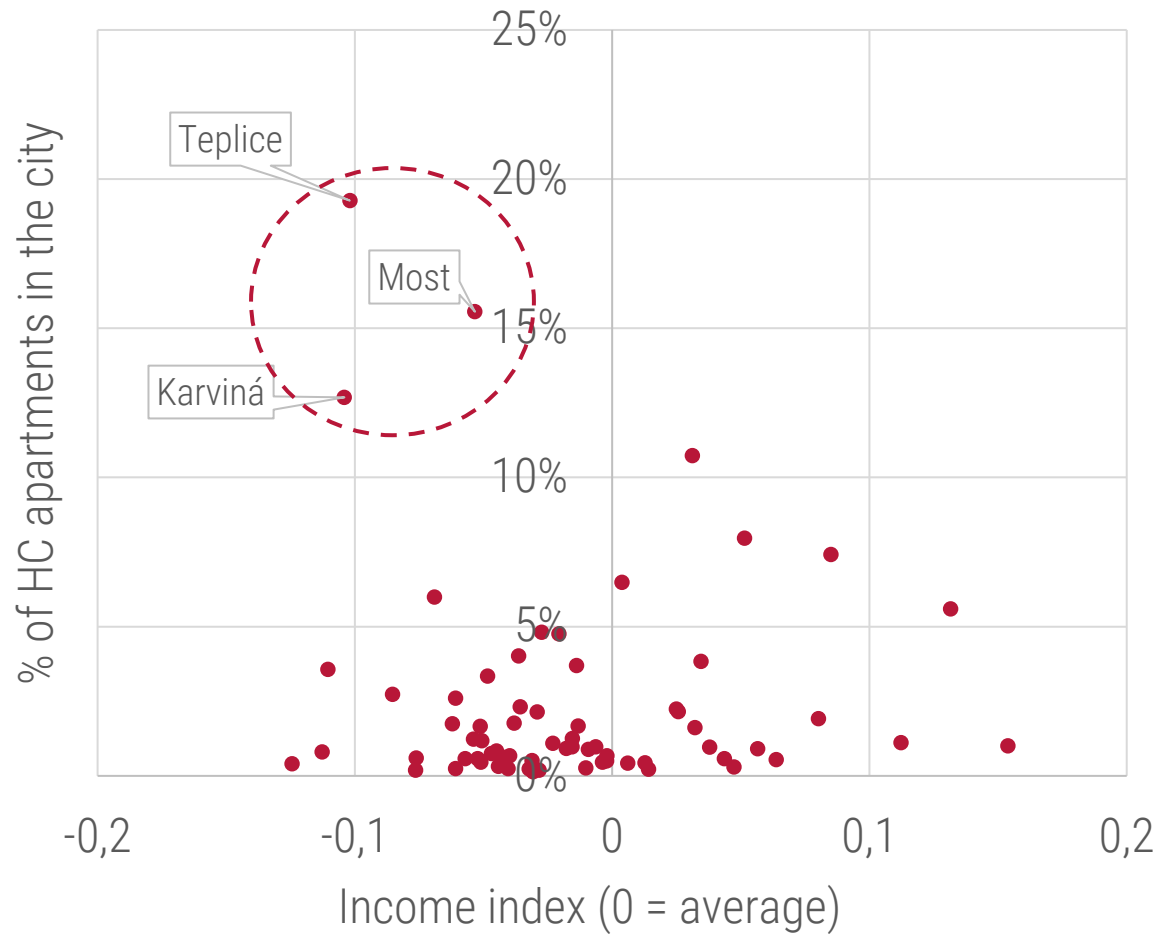
Source: own elaboration based on Statistics Poland (2021) and C40 report on energy poverty in Warsaw (2022).

In Czech housing cooperatives less affluent people live



- In Czechia, the average income of people living in housing cooperatives is 35K CZK monthly, whereas the whole population is 48.2K.
- When it comes to mean, the difference is 38K vs. 35K again in favour of the whole population.

Cities with a high share of cooperative ownership experience problems related to transformation and social exclusion of ethnic minorities



- On the county level, there is no correlation between lower income and living in a housing cooperative.
- Outliers: Teplice, Most, Karviná – post-mining mid-sized cities with various social problems.

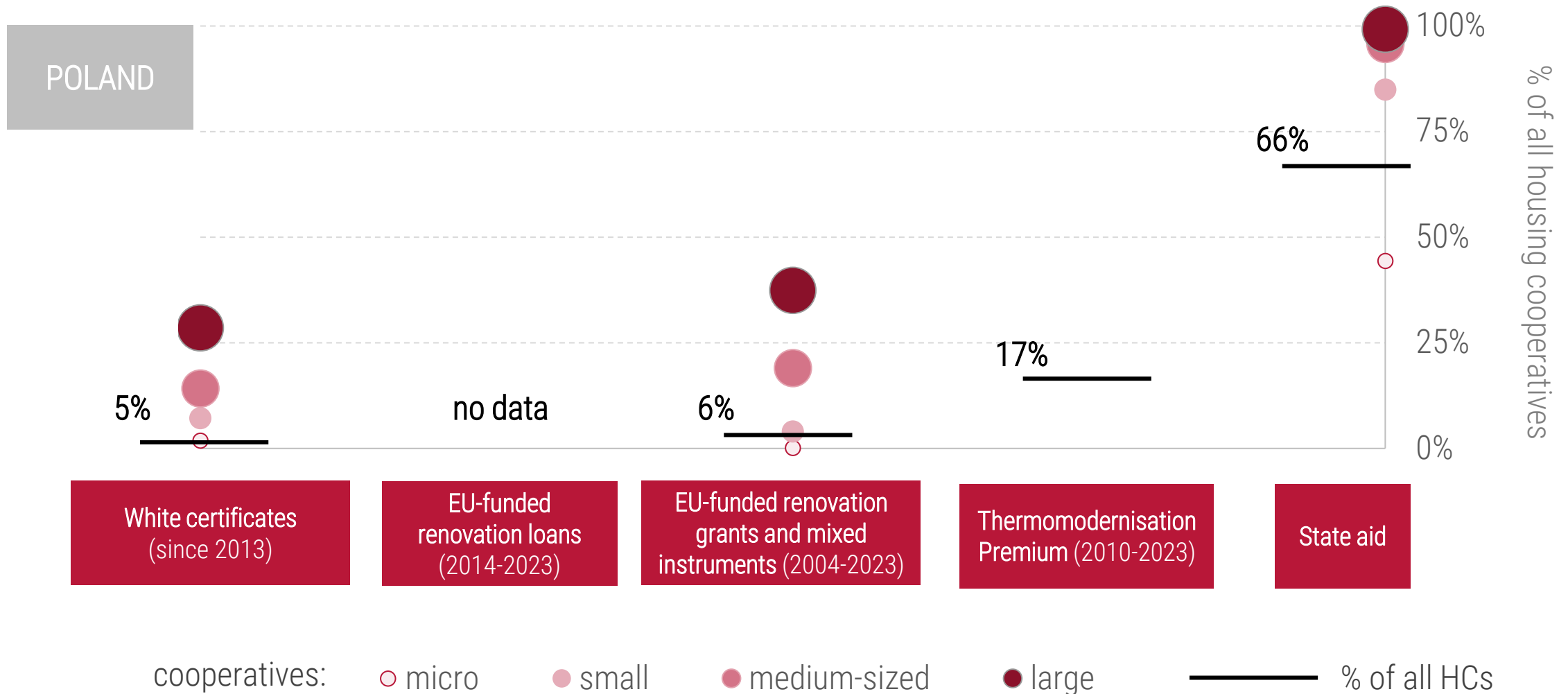




Support for energy investments in Polish and Czech housing cooperatives

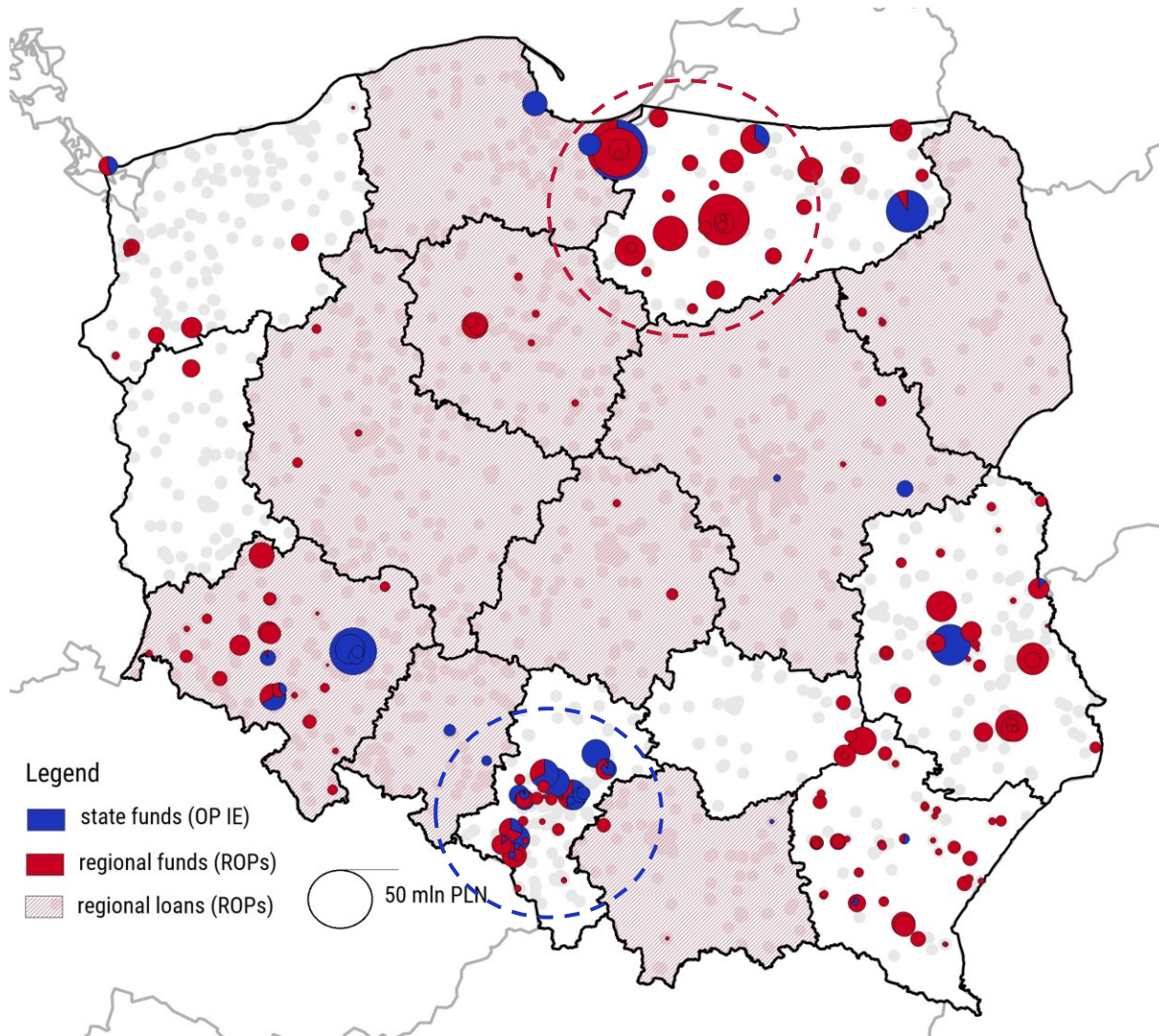


The bigger the cooperative, the higher the capacity to conduct energy renovations . | :



Source: own elaboration based on data from (1) Energy Regulatory Office (3), EU funded project databases (4) Information provided by BGK (5) National Register Court.

Regional policy matters: EU-funded support for HCs is unevenly distributed

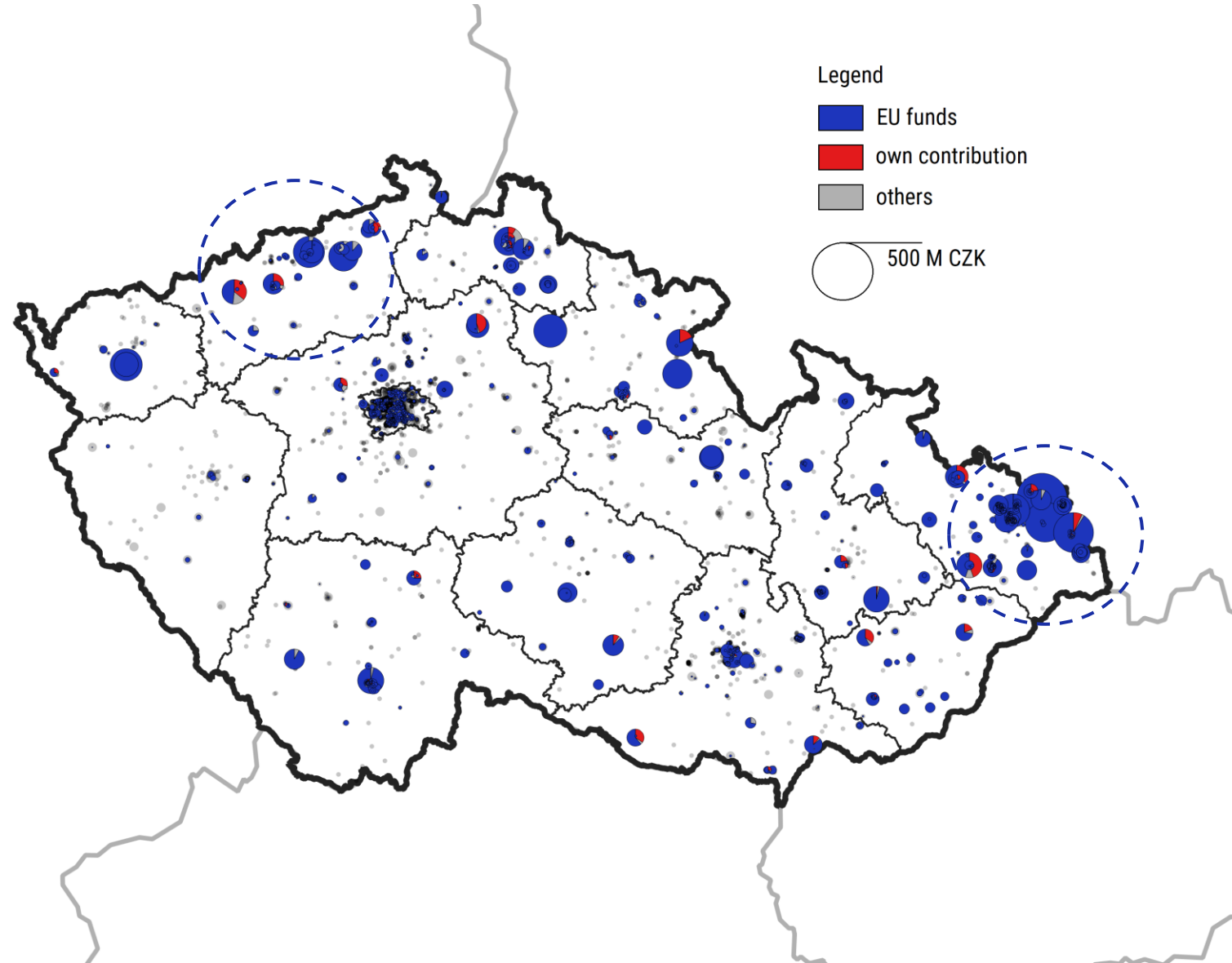


- **state level** offered dedicated mixed support for the Upper Silesia, under the negotiated between regional stakeholders (Program dla Śląska) as a pre-Territorial Just Transition Plan.
- **regional authorities** heavily supported cooperatives through loans (most) and subsidies in four regions, especially in Eastern Poland.
- three regions without particular policies regarding housing cooperative support.
- since 2021, support for housing cooperatives from EU funds is possible only at the national level.

Source: own elaboration based on EU funded project databases [SRP, KSI SIMIK, LSI]

In Czechia, state-led policy also matters: channelled to post-industrial Northern areas | :

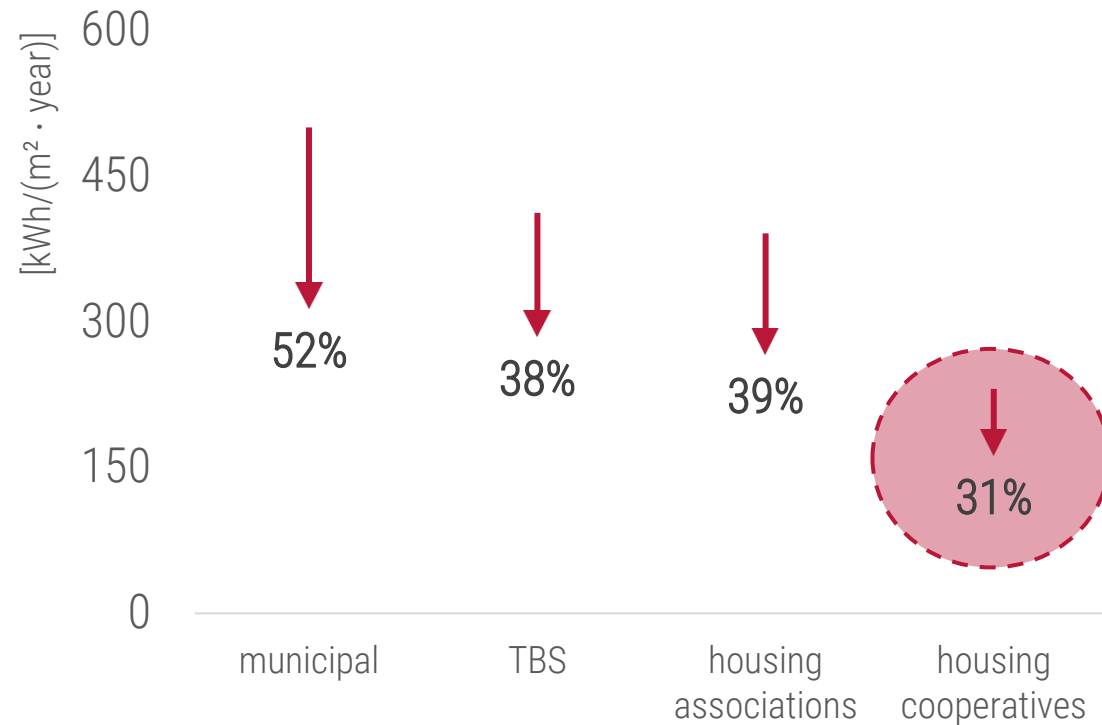
- Financial support for housing cooperatives in Czechia concentrates in two subregions.
- These are subregions historically dependent on coal mining – lignite mines in Most Basin (North Bohemia) and black coal in Ostrava-Karvina Basin (North Moravia-Silesia).
- Instruments such as Zelená úsporám, Panel+.



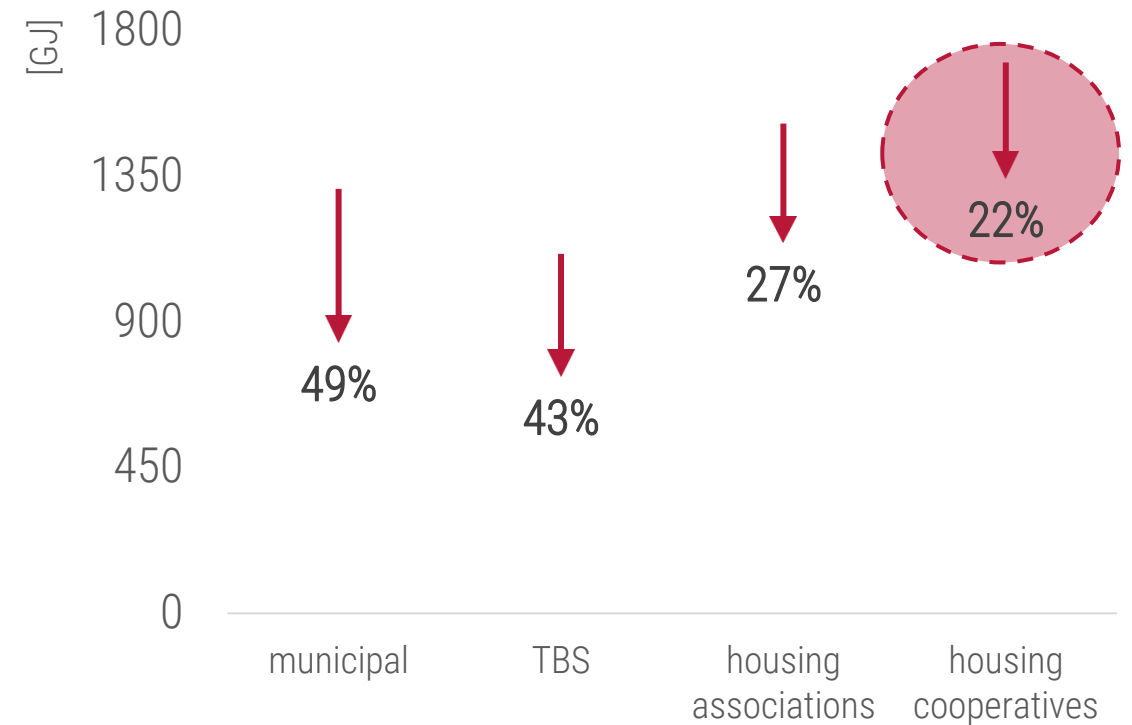
Energy renovation investments reduce emissions and generate savings, but to a limited extent



Average value of primary energy consumption before and after energy renovations



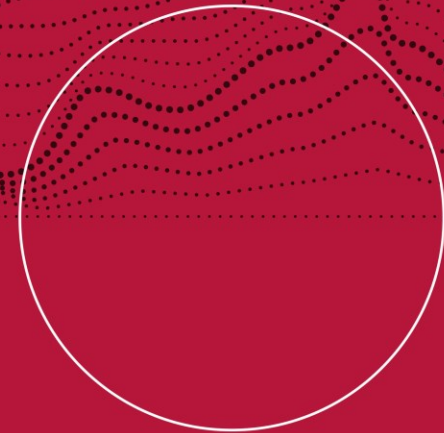
Average annual value of central heating consumption before and after energy renovations



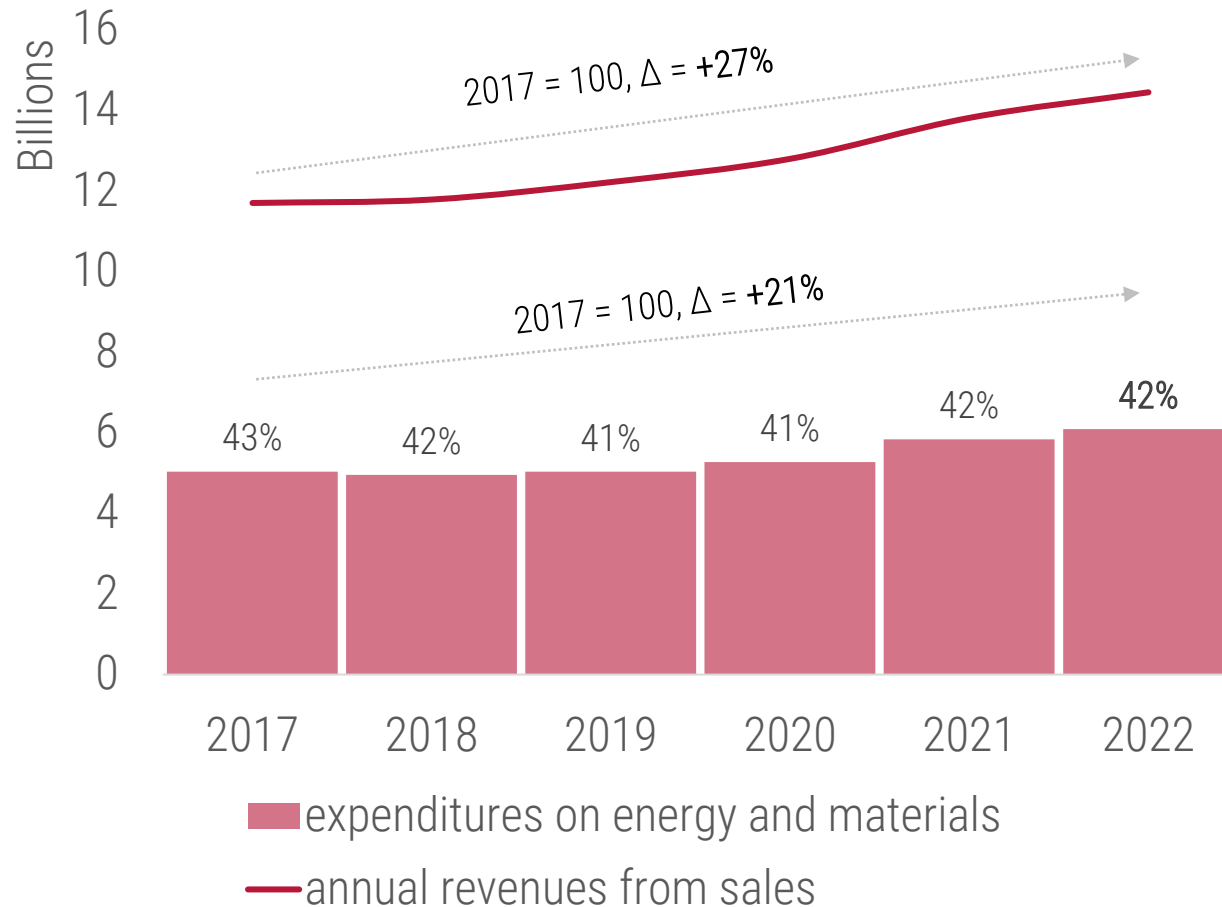
Source: own elaboration based on Statistics Poland: Development of methodology and realisation of a survey of a thermo-modernization activity scale in multi-dwelling residential buildings. In the report, data were collected for the period 2010-2016.



Energy crisis 2022 in Polish and Czech housing cooperatives – initial analysis

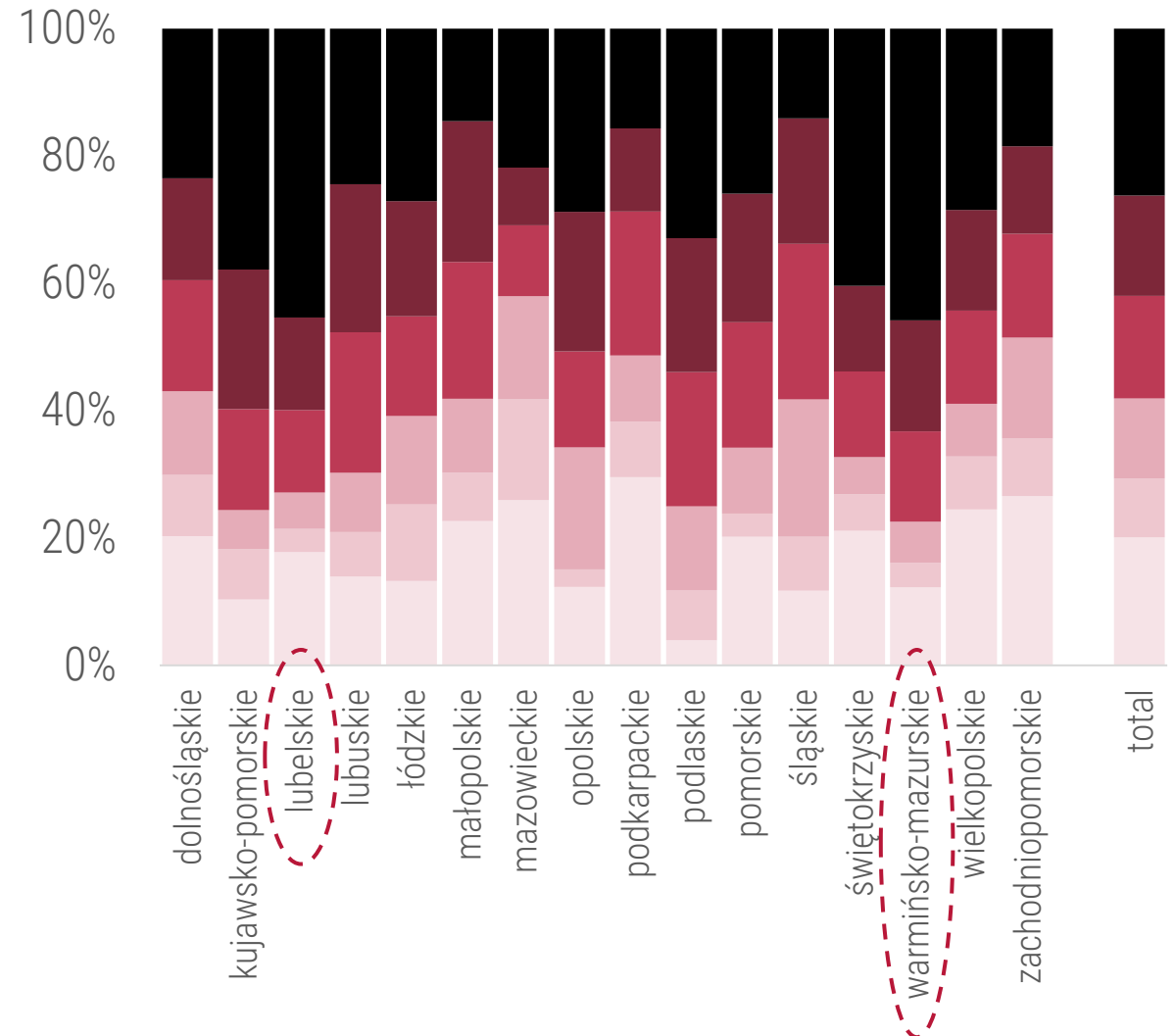
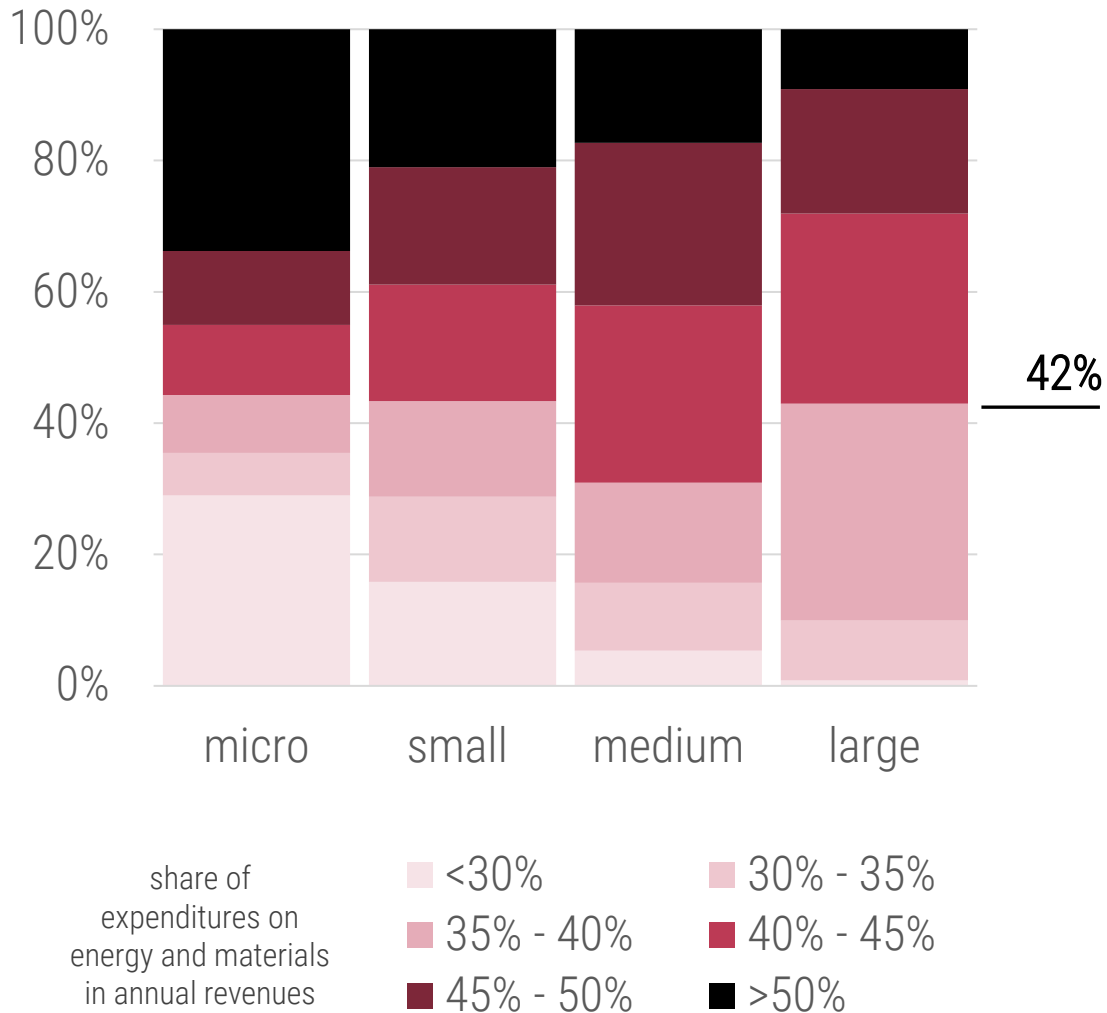


The relative share of expenditure of energy and materials in Polish housing cooperatives generally remained stable...



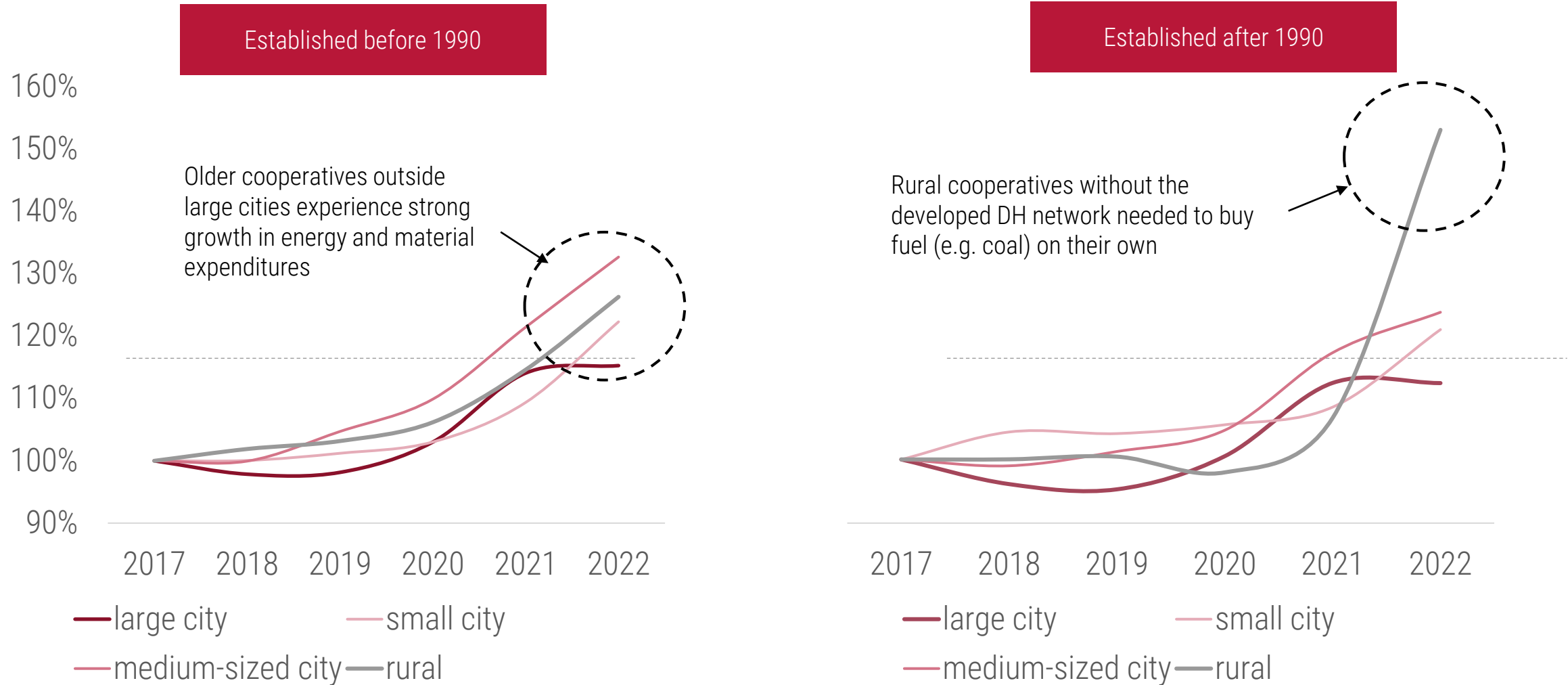
Methodological limitation:
there is no possibility to collect data on a particular category within energy and materials. To this category, without energy (electricity, gas, heating) we can also include the consumption of water, motor fuels, office materials, spare parts for office/service equipment. However, in the case of HCs, the categories devoted to heating are the most significant, so we can carefully assume that this category mirrors especially energy issues.

The smaller the housing cooperative, the greater the variation in the share of expenditures on energy and materials



Source: own elaboration based on administrative data (Rejestr.io). Sample: n=1746.

Cooperatives in large cities, thanks to anti-inflation shield, have so far avoided a drastic increase in energy expenditures – in opposite to rural cooperatives



Source: own elaboration based on administrative data (Rejestr.io). Sample: n=1746.

Small rural housing cooperatives had to deal with fuel shortages



dnia na dzień. Ta trudna sytuacja była już zauważalna rok wcześniej, wówczas rozpoczęły się stopniowe podwyżki opłat za centralne ogrzewanie. Od miesiąca września na wniosek Zarządu po przedstawieniu kalkulacji Rada Nadzorcza podniosła opłatę za centralne ogrzewanie o kwotę 5,30 i ta opłata wyniosła 12 zł za metr sześcienny. Liczyliśmy na zrozumienie mieszkańców, ale niestety tylko część i to mniejszość wykazała się zrozumieniem. Mieszkańcy nie zdają sobie sprawy, że przy takim wzroście opatu doprowadzenie do upadłości lub utracie płynności finansowej było bardzo łatwe.

Z uwagi na brak własnych środków Zarząd zdecydował o wzięciu kredytu na zakup opału w miesiącu wrześniu.
Głosy z osiedla brzmiące:

- Trzeba było kupować opał jak był tańszy i magazynować
- Po co taki drogi węgiel kupowaliśmy
- Co obchodzi lokatorów kredyt
- Trzeba było szukać tańszego węgla
- Ślaczego robiliśmy elewację jak można było kupić opał

W miesiącu lipcu rząd ustawą przyznał między innymi dla naszych mieszkańców dodatek węglowy w kwocie 3 tys. złotych. Praktycznie ta kwota pokryła podwyżkę w większości mieszkań.

Zwracając się do lokatorów z apelem o wpłatę tych środków na konto Spółdzielni. Mielibyśmy na zakup opału i bez kredytu dalibyśmy sobie radę. Urząd rozpoczął wypłatę we wrześniu. Na konto lub do kasy wpłaciły po 3 tys lub mniej 55 osoby. Na osiedlu rozmawiano, żeby nie wpłacać. Czy to było złośliwie tego nie wiemy? Czy osoby które wpłaciły te środki muszą partycypować w kosztach odsetek płaconych przez Spółdzielnię. Wiele osób

otrzymujących dodatku mieszkaniowe płacą czynsze bardzo małe, bo dofinansowanie do podwyżki otrzymują 2 razy. /załącznik o wielkości podwyżki po dofinansowaniu/

Wynik finansowy za 2022 rok to strat w wysokości 172 tys. złotych. Główną przyczyną straty jest koszt podgrzanie wody, inne działły zmieściły się w rozliczeniu w przychodach. Musimy rozważyć na przyszłość co w tym temacie zrobić, aby podgrzanie wody przy tych cenach było ekonomiczniejsze.

Informuję także, że bardzo dobrze układa się współpraca z Radą Nadzorcą za co dziękujemy. Rok 2022 był bardzo trudnym rokiem największym mankamentem były kłopoty związane z opalem. Nie dosyć, że ceny opału rosły w zatrważającym tempie, to był to towar bardzo deficytowy. Podziękowania należą się również tym członkom Spółdzielni, którzy zadeklarowali się wpłacić dodatek węglowy na konto Spółdzielni, dzięki czemu nie musieliśmy podnosić opłat za C.O. i C.W. i mogliśmy utrzymać ciągłość w dostarczaniu ciepła. Na zakończenie dziękujemy wszystkim Członkom i mieszkańcom naszej Spółdzielni za bezinteresowną pomoc przy utrzymaniu estetyki na terenie naszego osiedla.

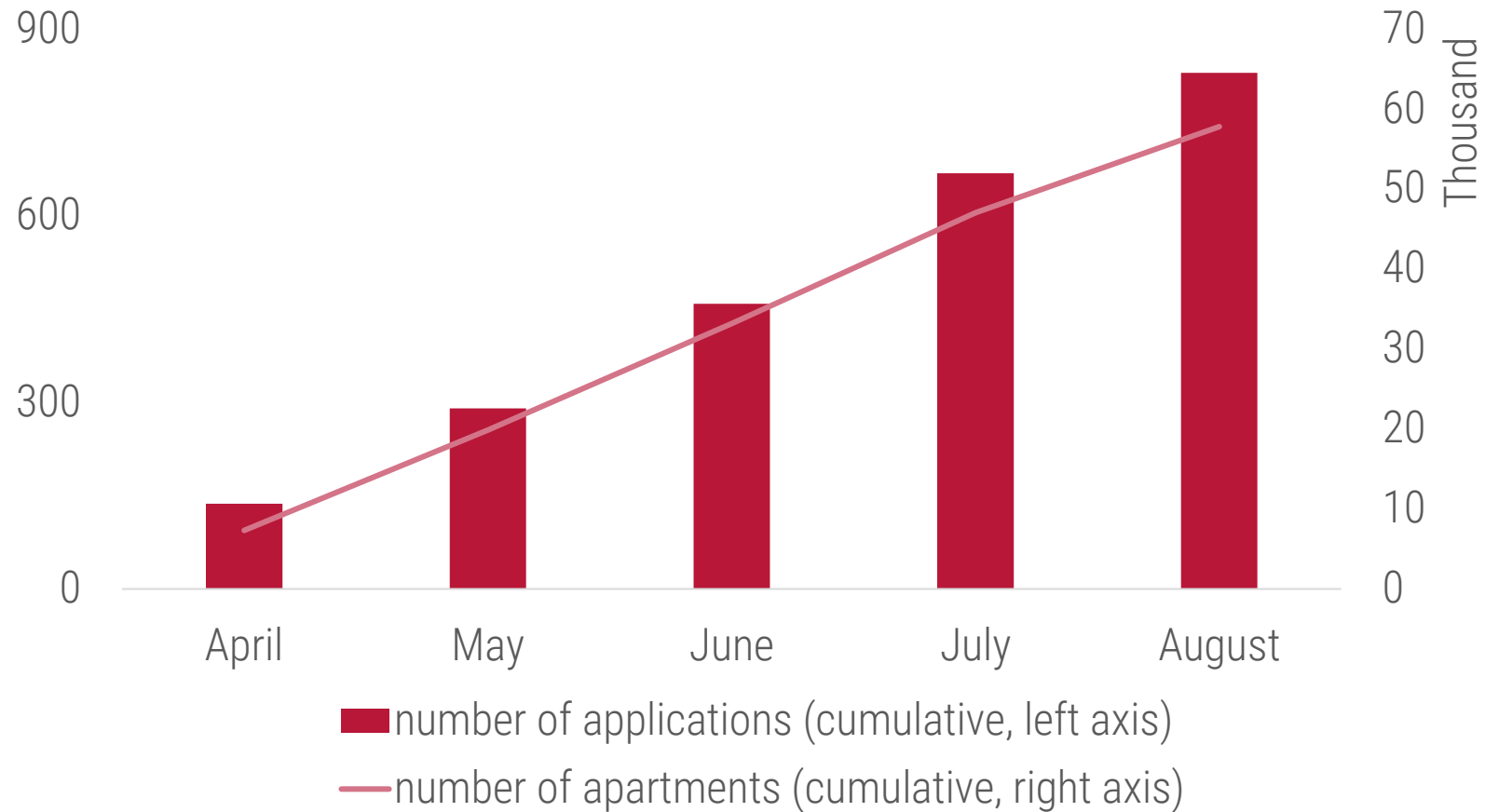
Dziękujemy również wszystkim przybyłym za udział w Walnym Zgromadzeniu i życzymy wszystkim bezstresowej współpracy i zdrowia.

Aby zapobiec zwiększaniu strat i braku środków na zakup opału oraz regulowanie bieżących zobowiązań spółdzielni Rada Nadzorcza i Zarząd Spółdzielni zmuszony był dokonać wzrostu opłat za centralne ogrzewanie o 8 zł na okres grzewczy tj. od 01.11.2022 r. do 31.03.2023 r.

Dokonując wzrostu opłaty mieszkaniowej Zarząd jednocześnie aktywnie zaangażował się w sprawę uzyskania z gminy Wicko dodatków węglowych w kwocie 3.000,00 zł przez właścicieli mieszkań, co pozwoliło na zniwelowanie podniesionej opłaty za C.O.
Dużym problemem z jakim musiał się borykać zarząd w okresie zimowym 2022/2023 to nie tylko problem braku i wysokich cen opału, ale też jego jakość. Nabywany miał węgiel, który był dostarczany pochodził z dalekich krajów /Columbi

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The response from the government was a RES grant.
Since February 2023, more than 3% Polish HCs applied for support



Source: Information obtained directly from BGK (September 2023).

During the energy crisis, those connected to district heating suffered the least



- The crisis affected mostly buildings individually heated by natural gas.
- The government introduced a flat subsidy for electricity, natural gas and heating for each household in Czechia.
- The trend of cutting out of the district heating grids was reverted – now raising interest in being connected (e.g. Kutná Hora).
- Rising interest in renewable independent energy sources.

Case Česká Lípa (OSBD)

- Central Co-op OSBD Česká Lípa was continuously dissatisfied with policy of the foreign district heating system operator.
- More and more buildings cut off the system and left the OSBD.
- The heating system was endangered by economic and technical collapse
- OSBD fixed costs per housing unit rose.

SOLUTION: OSBD stepped into the district heating operator by buying 20% shares

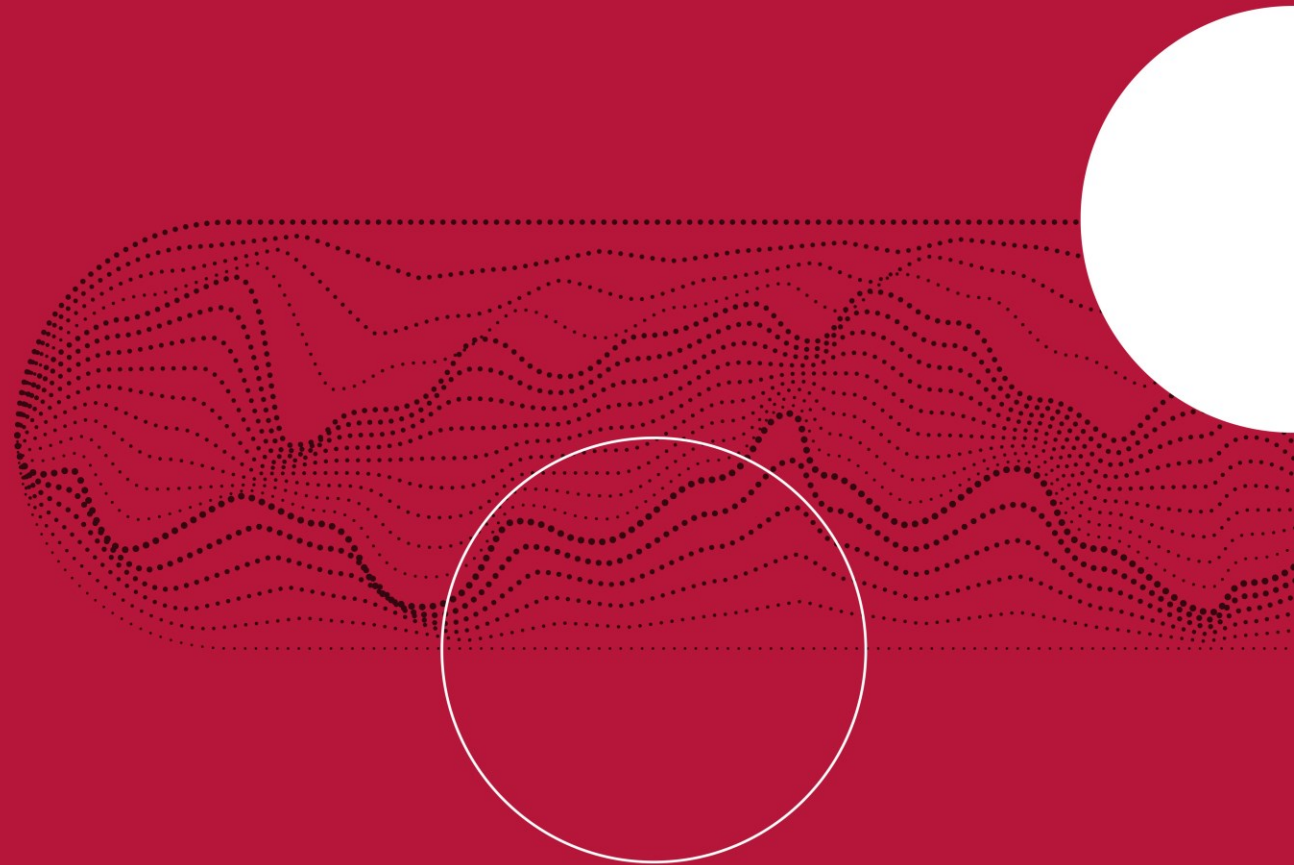
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Summary



Polish and Czech housing cooperatives are at different stages of institutional transformations, which may influence their resilience and adaptative capacity



1. Larger housing cooperatives appear to be more resilient to crises and ready for an energy transition.
2. Using district heating networks allowed housing cooperatives to mitigate the effects of the crisis, primarily due to the utilization of national energy sources in combined heat and power plants.
3. Due to the differences in the size of cooperatives, Czech housing cooperatives were more flexible in transitioning to alternative energy sources than Polish ones, where such practices are rare.
4. During the energy crisis, cooperative members are becoming more active in seeking alternative solutions, but there are also anti-transition movements.
5. Renewable energy sources are perceived more as a way to achieve financial savings and reduce dependence on uncertain fuels; environmental concerns are seen as secondary.



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