Participation in CRE and investment in RE

Abstract

Introduction

Methodology

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# Willingness to participate in CRE and level of engagement

1. Remove from the data set and get new association rule
2. Fuzzy involvement score (FIS) for CRE and RE
3. Regression for CRE-> feature importance/XAI? Shapely/LIME
4. Regression for RE->feature importance/XAI? Shapely/LIME
5. Relationship between RE and CRE

Do you currently participate or have invested in a community energy group or project?

'q\_031: {Yes: 1, No: 0}

What role do you play in the community energy group/project? Select all that apply to you.

*{Yes: 1, No: 0}*

'q\_045', Investor

'q\_046', Employed or contracted to project (either currently or previously)

'q\_047', Volunteer for project (from key organizer to helping set up for an event)

'q\_048', On decision-making group (eg board or committee)

'q\_049', Provide occasional expertise or on community advisory group

'q\_050', Traditional custodian advisor

'q\_051', Talk to locals about the project

'q\_052', Talk to government or other decision-makers (eg businesses)

'q\_053', Provide or lease land/space to the project

'q\_054', Supply other inputs (eg crop waste for bioenergy etc)

\*\*\*\* Fuzzy Score\*\*\*\*

**High Involvement:**

'q\_048', On decision-making group (e.g., board or committee)

'q\_046', Employed or contracted to the project (either currently or previously)

'q\_047', Volunteer for the project (from key organizer to helping set up for an event)

**Medium Involvement:**

'q\_045', Investor

'q\_049', Provide occasional expertise or on community advisory group

'q\_050', Traditional custodian advisor

'q\_053', Provide or lease land/space to the project

'q\_054', Supply other inputs (e.g., crop waste for bioenergy etc)

**Low Involvement:**

'q\_052', Talk to government or other decision-makers (e.g., businesses)

'q\_051', Talk to locals about the project

High involvement includes roles with direct impact and decision-making power in the project, medium involvement includes those who contribute resources or expertise, and low involvement comprises individuals who primarily engage in conversations about the project.

# Willingness to invest in RE

Here's the categorization of investment levels in renewable energy, indicating high, medium, and low levels:

Please select which of the following situations apply to you (you can select more than one)

*{Yes: 1, No: 0}*

'q\_020', I purchase renewable 'Green' energy through an electricity retailer

'q\_021', I have renewable energy installed (including solar PV, solar hot water, wind or bioenergy generators)

'q\_022', I have a battery for electricity storage

'q\_023', I have an electric vehicle

'q\_024', I plan to install renewables (solar PV, solar hot water, home battery, wind or bioenergy generator)

'q\_025', I want to generate some or more renewable energy but currently have barriers (for example renting, inappropriate roof, shading, unit complex etc)

**High Investment:**

'q\_021', I have renewable energy installed (including solar PV, solar hot water, wind or bioenergy generators)

'q\_022', I have a battery for electricity storage

'q\_023', I have an electric vehicle

**Medium Investment:**

'q\_020', I purchase renewable 'Green' energy through an electricity retailer

**Low Investment:**

'q\_025', I want to generate some or more renewable energy but currently have barriers (for example renting, inappropriate roof, shading, unit complex etc)

'q\_024', I plan to install renewables (solar PV, solar hot water, home battery, wind or bioenergy generator)

High investment includes those who have already made significant investments in renewable energy systems or products, medium investment comprises individuals who have made moderate investments or have plans to do so, and low investment consists of individuals who are interested in investing in renewable energy but currently face barriers.

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