Synthesis of a Theoretical Framework for Understanding Factors that Catalyse and Influence Household Adoption of Rainwater Harvesting

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Background

- Regional growth
- Supply limitations
- ‘Green drought’
- Governance environment
- RH penetration
- Research questions
- Research aims

FIGURE 1: South-East Queensland Local Government Area Divisions

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Ecological modernisation theory

- Huber (1985) ‘direct effects’ of PE technological innovation decoupling economic development from environmental degradation
- Janicke (1988) contextualised pro-environmental innovation with ‘indirect effects’ of public sector governance and policy reform
- Spaargaren and van Vliet (2000) ‘close the loop’ by recognising the wider social community and the role of consumption
Diffusion of innovation theory

• “A slow advance in the beginning, followed by a rapid and uniformly accelerated progress, followed again by progress that continues to slacken until it finally stops: These are the three ages of … invention…. If taken as a guide by the statisticians and sociologists, [it] would save many illusions.” (Tarde: 1903,127).

• Focus on Characteristics of the Innovation
  • These five factors have been “widely used for the past twenty years” and in a meta-analysis of DI studies explain “47% to 87% of the variance” in adoption (Rogers 1983: 211).
  • Despite a claim they are conceptually distinct, Rogers concedes: “Each of these moderators is somewhat empirically related with the other four” (Rogers 1983: 211) …

• “As yet, there has been very little diffusion research designed to determine the relative contributions of each of the five types of variables” (Rogers 1983: 234).
### Theoretical synthesis

**Moderators derived from EM**
- PE technological innovation
- RH system sophistication
- PE governance and policy
- Cost and economy
- Voluntariness
- Household independence
- Community norms and values

**Moderators derived from DI**
- Relative advantages of RH
- RH system ease of use
- Past RH experiences
- Image or status
- Compatibility
- Visibility
- Demonstrable benefit

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Methodology

• Data collection decisions
• Sampling

Rainwater Harvesting System

- No RH System present
- RH System retrofitted by current occupants
- RH System fitted before purchase by current occupants

Local Government Area (LGA)

- Beaudesert
- Brisbane
- Ipswich
- Redcliffe
- Toowoomba

• Data analysis
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