Reasons Against Adopting Renewable Energy Systems in Consumer Decision-Making

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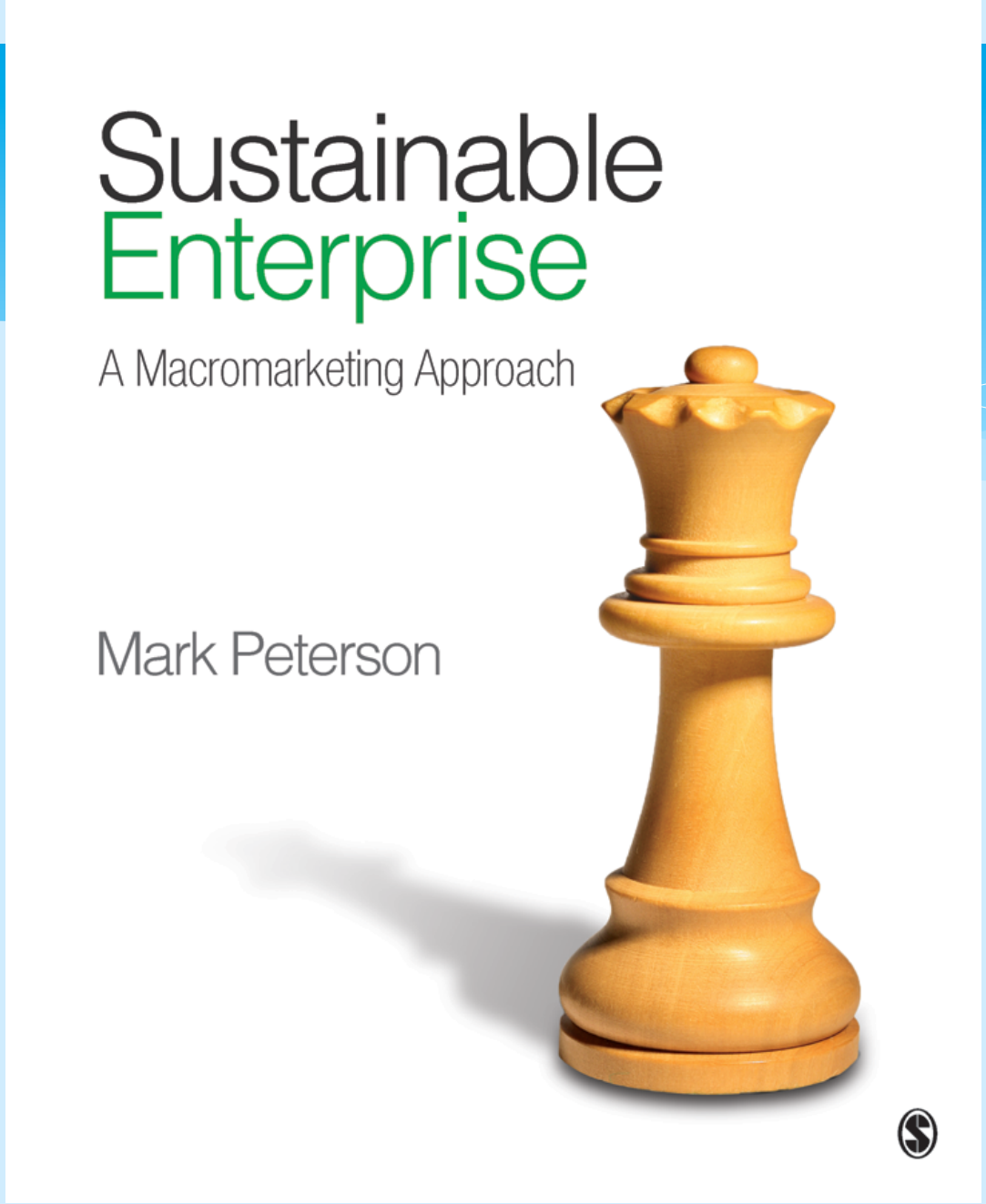
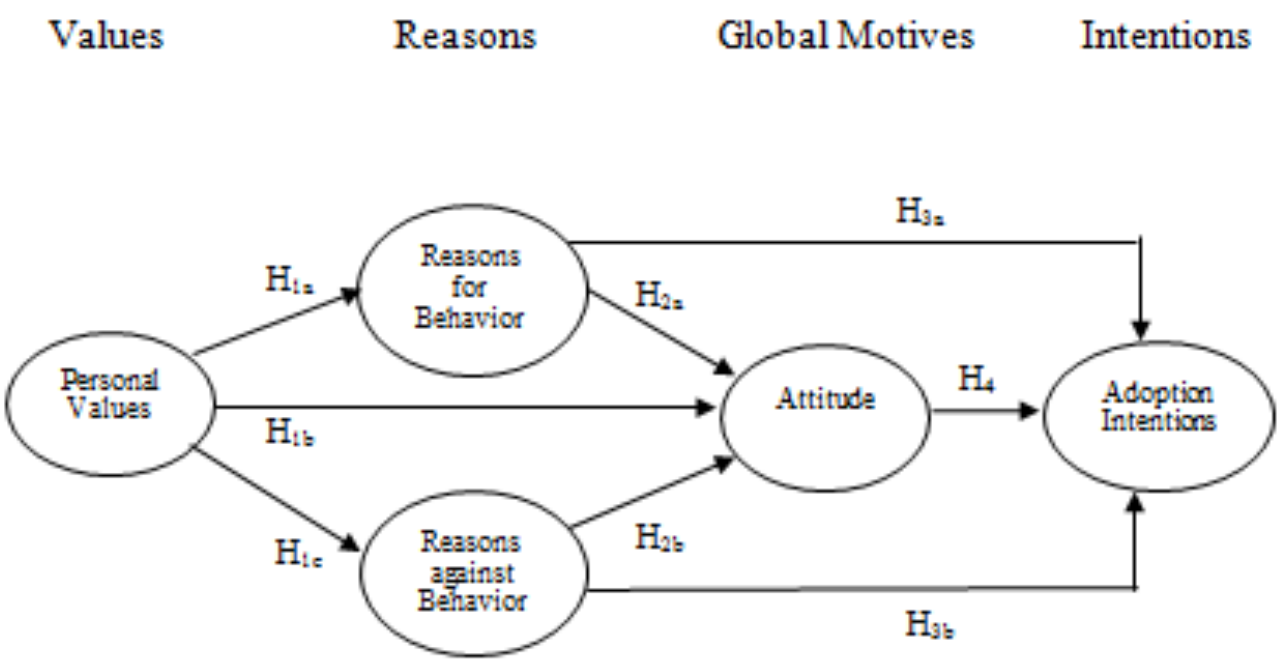


http://www.sustainabilitysage.com

Focus of the Study

* The attitude-behavior gap
* Applying Behavioral Reasoning Theory in the context of sustainable consumption

Conceptual Model of the Study



Source: Adapted from Westaby (2005)

Comparison of Sample with Population of Irish Home Owners (%)

Variable		Solar Panels Sample (n=254)	Population of Irish Home Owners
Gender	Male	46.7	50.0
	Female	53.3	50.0
Age Groups*	15-24	2.6	20.0
	25-34	12.8	
	35-44	23.3	45.0
	45-59	33.0	
	60+	28.2	35.0
Region	Dublin	20.7	24.0
	Rest of Leinster	30.0	28.0
	Munster	28.2	28.0
	Connacht/Ulster	21.1	20.0

Scale Items, Construct Reliabilities and Std. Factor Loadings

Values	
Personal Values (a=.88; AVE=.75)	
"Using solar panels…"	
q1. would be in line with your own personal values.	.89
q2. fits the way you view the world.	.83
q3. would be consistent with the way you think you should live your life.	.87

Scale Items, Construct Reliabilities and Std. Factor Loadings

Reasons for adoption

Independence benefit (a =.86; AVE=.68)

"Installing solar panels on your house would…"

q18. reduce your dependence on oil or gas.	.68
q19. make you self—sufficient.	.92
q20. make you independent from national energy providers.	.86

Environmental benefit (a =.86; AVE= na)

"By installing solar panels on your house you would help to…"

q21. improve your local environment.	.90
q22. significantly reduce greenhouse gases	.91

Economic benefit (a =.86; AVE=.67)

"Installing solar panels on your house would…"

q23. eventually pay off and make a profit.	.79
q24. allow you to spend more money on other things in life other than your energy bill	.83
q25. reduce your monthly energy bill significantly.	.84

Scale Items, Construct Reliabilities and Std. Factor Loadings

Reasons against adoption

Perceived compatibility with existing home (a =.77; AVE=.55)

q9. Solar panels would not fit with the existing infrastructure of your house	.56
q10. In order to install solar panels on your house, you'd have to undertake some serious renovation	.85
q11. Solar panels could only be installed on your house with major additional work.	.79

Risk barrier (a =.83; AVE=.64)

"When thinking about installing solar panels on your house, you would…"

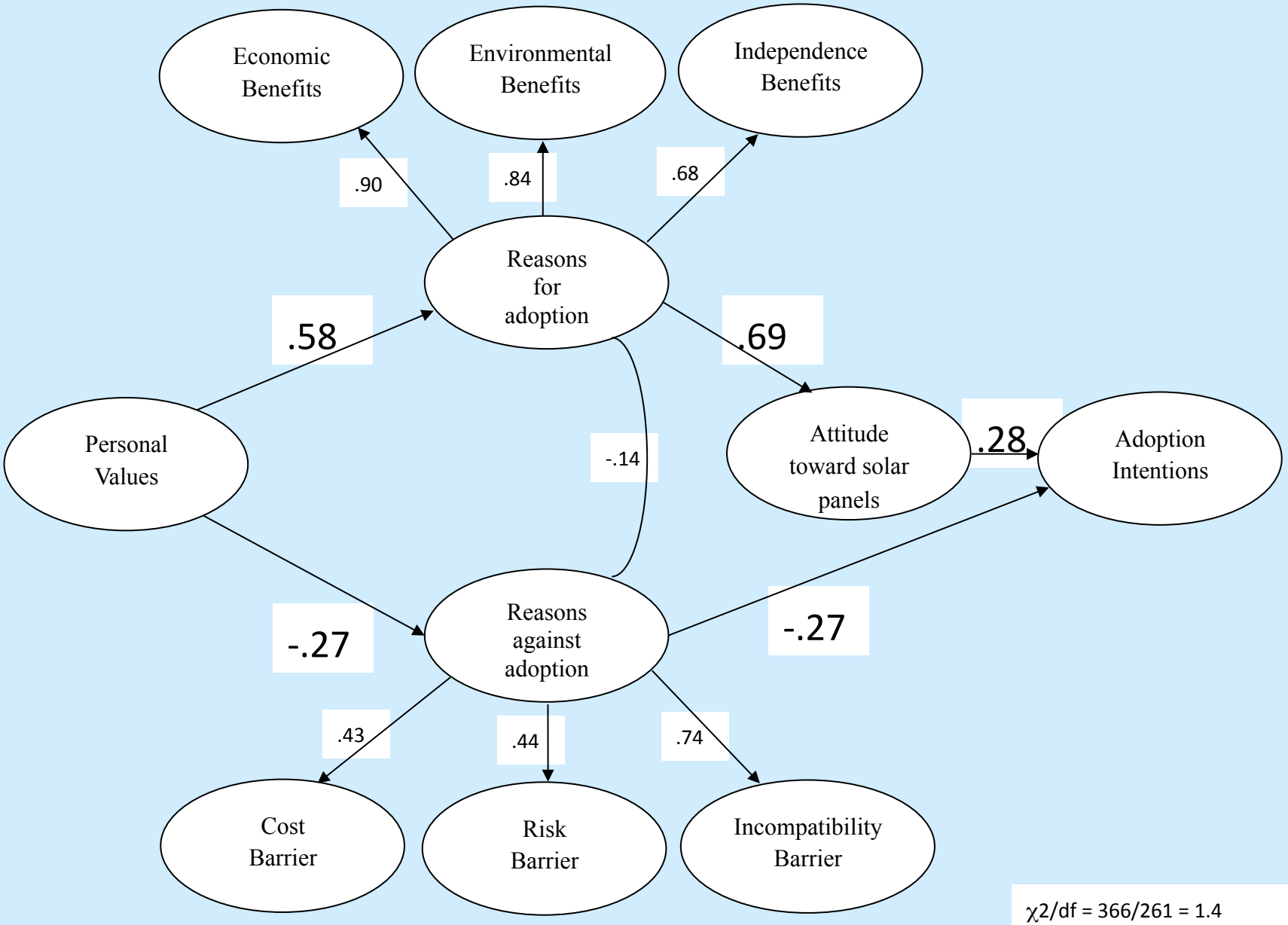
q12. be concerned that solar panels would not provide the level of benefits you would be expecting.	.71
q13. worry about how much on-going maintenance they would require.	.75
q14. worry about how dependable and reliable they would be.	.92

Initial cost barrier (a =.88; AVE=.72)

q15. The initial cost of installing solar panels on your house would be too high for you.	.86
q16. You would find it a financial strain to install solar panels on your house.	.91
q17. You do not have the money to install solar panels on your house.	.76

Scale Items, Construct Reliabilities and Std. Factor Loadings

Global Motives	
Attitude toward Solar Panels (a =.85; AVE=.66)	
"Installing solar panels on your house in the next 12 months would…"	
q4. be very good.	.82
q5. offer a lot of advantages.	.90
q6. add a lot of value.	.70
Adoption Intentions (a =.90; AVE = na)	
q7. You will install solar panels on your house in the next 12 months	.91
q8. You intend to install solar panels on your house in the next 12 months	.90



$\chi 2/df = 366/261 = 1.4$

CFI = .97, TLI = .97, RMSEA = .04

Effect of Consumer Reasons on Intentions to Adopt

Variable	Direct Effect		Indirect Effect		Total Effect
Reasons for adoption	0		.19		.19
Reasons against adoption	-.27		0		-.27

Comparison of the Mediated Model and the Unmediated Model with the Final Model

Model	Chi-Square	Degrees of Freedom	Chi-square difference test with Final Model subtracted	CFI	TLLI	RMSEA
Mediated	371.9	262	9.1 for 2 df	0.97	0.97	0.04
Unmediated	417.3	262	54.5 for 2 df	0.96	0.95	0.05
Final	362.8	260		0.97	0.97	0.04

***Threshold value for 2 df = 5.991. Difference suggests the final model is the superior model.**

Conclusion

* Broaden lens to better understand green behaviors.
* Include reasons.
* Do not forget “reasons against”.