

On the Influence of Psychological Factors and Beliefs on the Acceptance of Coercive Policies

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1. Introduction

Coercive policies are defined as policies of an authority that charges or restricts its subjects with the aim to protect or restore common goods. Prime examples for these are environmental taxation or, in the case of transport planning, more specifically, road pricing. Such coercive policies are seldom cheered by those who have to pay but in some cases accepted. Clearly the details of a proposed scheme will influence the acceptance of some, for example in Edinburgh the feared effects on the local economy raised many concerns, though some others might reject such coercive policies even without seeing the details. Recent findings and wide-spread publications or documentary movies such as “An Inconvenient Truth” (www.climatecrisis.net) have further triggered a renewed discussion on climate change and with it a discussion whether coercive policies are needed to mitigate the likely effects. Nowadays most governments agree that at least some coercive measures are needed and are concerned about the acceptance of such in the population. Acceptability to the public is seen as important not only for “winning the next election”. Besides, enforcement of violators is expensive and related to this is also the fear of economic loss if the scheme is not accepted. In London for example it could be observed that, at least initially, some people replaced shopping trips previously done in Central London by diverting to stores not affected by the charge (Schmöcker et al, 2007).

There are established psychological constructs that can explain the acceptability of coercive policies. Most of the literature has again focused on the acceptability of road pricing as a prime example for coercive policies (see for example the contributions in Schade and Schlag (2003)) or on policies restricting car usage (Loukopoulos et al, 2005). Several studies have shown that factors relating to the respondents personal circumstances, his attitude towards the scheme introducing government as well as factors related to the scheme itself can explain possibly acceptance fairly well. One might refer to the constructs “infringement on freedom”, “fairness”, “problem awareness”, “perceived effectiveness” and “trust in government” hence as psychological determinants as they directly or indirectly explain acceptability. However, these psychological determinants may be influenced by a person’s underlying values. It has been shown in environmental psychology literature that proenvironmental behaviour was influenced by their values (e.g. Biel and Thøgersen, 2003). Yet, it has not yet been well investigated how deeper determinants such as values influence people’s acceptance towards coercive policies. In this study, we propose “belief in absolute values” as a deeper determinant of acceptance. We define belief in absolute as an belief that there is objective truth, true justice and an authentic beauty in this world. The opposite to this would be a person who believes “everything is relative”. For example, religious people who believe in monotheism tend to have this belief, as the idea of “God” is related to the concept that there is an absolute creator and authority. However, also those without religious beliefs might have absolute beliefs. An example would be a nature activist believing that the nature is worse protecting even under severe personal sacrifices. Those with absolute beliefs might generally understand the necessity of coercive policies that are called for the sake of social welfare. They might thus perceive such policies as fair and effective, and therefore accept. In this study, we conducted an analysis for exploratory investigation of how the belief in absolute values influences acceptance and the before mentioned psychological determinants of acceptance. This is the first objective of this study.

Note that the structure of determinants of acceptance might be different across different countries. For example Fujii et al (2004) confirmed that determinants such as fairness and infringement on freedom transcend culture but that the relative importance of some factors, for example income effects, differs between Asian and European countries. Especially, the effects of belief in absolute are likely to be different across countries, depending among others on the general religious belief in the country. As

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abovementioned, this belief might be related to monotheistic ideas, which are more popular in some countries, such as UK, and less popular in other countries, such as Japan. Thus, we analyze determinants of acceptance in these two different countries and then compare the results between these two countries for exploratory investigation of how the structure of determinants of acceptance can be explained by the surrounding culture and history of the individual's origin. This is another objective of this study.

2. Presumptions regarding a deeper determinant “belief in absolute”

The details of any proposed coercive policies vary obviously in each case as the problems and needs of each city or country differ. Psychological literature attempts however to understand general factors that make coercive policies acceptable. The question might be posed as: “What are the underlying factors that convince people that the general or public benefits outweigh a person's individual costs?”. On the one hand the economists approach to this is to attempt to measure the total combined utility of a person, made up of both individual as well as public costs and benefits. On the other hand psychological literature proposes that attitudes and perceptions might describe acceptability better. In particular following seven factors have been shown to influence acceptability significantly:

Firstly, the perceived fairness of a scheme. E.g. Jakobsson et al (2000) show that if road pricing is perceived to be fair, acceptability significantly increases. The term fairness could be further split up in distributional and procedural fairness, both being shown to have one of the most significant effects on governmental policy (c.f. Lind and Tyler, 1988). Secondly, perceived effectiveness. Bamberg and Rölle (2005) discuss that convincing the public about the effectiveness of the scheme is key to gain support. Thirdly, social problem awareness. Schade and Schlag (2002) provide evidence that only those who are convinced that the car is a major pollutant will be convinced that a road user charge might be needed. Fourthly, and related to perceived effectiveness as well as social problem awareness, egoistic problem awareness. This factor describes whether a person perceives the problem to be significant not just related to the public in general but to him personally. Fifthly, self problem awareness. In contrast to social problem awareness this factor relates to the awareness that “my own behaviour is part of the problem”. Sixthly, infringement on freedom. This term describes what effect the proposed charge has on the person. In general one would expect the higher the fee, the less a person's income and the less options a person has to avoid paying, the higher the perceived infringement on freedom. Seventhly, trust in government. Fujii (2006) discuss that acceptance will depend partly on whether the government in general is trusted and whether it is trusted that for example revenues are used in the way proposed in the scheme. Of particular interest for this study are factors related to the perception of government as we explore whether absolute values support the trust in authorities in general and government in particular. Fujii (2006) showed that trust in government has a direct effect on fairness, infringement on freedom, perceived effectiveness, and acceptance. This can be explained as follows: If one trusts the government, he may expect the government will introduce less harmful policies (i.e. less infringement on freedom), will do fairer policies (i.e. more perceived fairness), and will trust the policies are more effective (perceived effectiveness).

2. Presumptions regarding a deeper determinant “belief in absolute values”

Having understood the importance of these determinants one might further ask what factors further shape a person's perception of these factors. Our presumption is that personal and cultural background are an important factor how a person perceives governments, or authorities in general, and with it the perception of demands introduced by these. Whereas one person might accept the authority of a government without much hesitation, another person might doubt that the same government should have any power at all. The conflict will be particularly clear if the government is clearly making bad decisions or if the government's policies are costly for the person, such as is the case for some coercive policies. Some persons might believe or trust the government in such a scenario, simply because of its role of authority, whereas others will not accept any absolute role of a government. This leads us to our presumption that “belief in absolute values” will have a positive (indirect) influence on the acceptance of coercive policies. We form our hypothesis wider than just the perception that a government should be obeyed in all circumstances, as we expect that “belief in absolute” will have further influences also on other factors discussed above. We define “belief in absolute” as the perception of a person that absolute values such as beauty, justice and truth exist. That is, a person believes that at least some of these values are not simply depending on the person's background and perceptions, but that values transcend culture. The opposite to a person believing in absolute values would be the perception that all values are relative, in other words

there is no truth that can be judged objectively. Besides the above described presumptions on the effect of belief in absolute on trust in government we hypothesize that belief in absolute also might have a positive effect on other factors related to the scheme. In particular perceived fairness and effectiveness as these are known to be directly influenced by the person's perception of the government.

As explained in the introduction the second part of our hypothesis concerns cultural background. Though we expect to see in principal the same relationships between "belief in absolute" and other factors across cultures, the effect might be much clearer in some. In particular there might be a difference between Western and East Asian cultures. As an example we compare Britain and Japan. Whereas Britain has a long history of a central monarchy being strongly connected to the governing religion, Japanese history is characterized by a very hierarchical society and a country split into many governing prefectures. More importantly, in the past British, or in general Western, culture was dominated by Christian monotheistic beliefs. Nowadays the influence of such monotheistic, absolute views is however much reduced in a secularized society, leading to a sometimes sharp division. On the one hand a group believing in absolute values, on the hand a group strong advocating that religions and other movements cannot make any absolute claims. In Japan the situation is different. For a long time the country has been dominated by values originating in Buddhist and nature religion. These might also be described as "absolute values", though claims of "universal absoluteness" are less pronounced as in Christianity. Similar to Western culture, also Japanese society is nowadays changing fast. Open rebellion against Buddhist religion can however rarely be observed. In the vast majority the influence of religion on Japanese individuals' beliefs has been reduced though many religious customs are upheld. Behaviour in Japanese society is further often dominated by social norms. In other words the individuals support or rejection of, for example, absolute ideas does not influence his behaviour as clearly as in Western culture. Based on these observations our hypothesis is that in Britain the effects of "belief in absolute" on acceptance of coercive policies can be seen much clearer.

3. Hypothetical scenario and survey design

To understand and test these two hypotheses we designed a survey asking students in London and Tokyo about their acceptance of a hypothetical scenario as well as their attitudes towards government and their belief in absolute values. We posed following scenarios to the students in London: *"The UK government has decided to introduce an environmental tax of £50 per month to be paid by all UK residents including all university students. The decision was made after a long debate with several economists and scientists through which the government got convinced that this additional tax is needed to influence greenhouse emissions. The tax will be used for environmental research and to subsidise the introduction of new technology that emits less CO₂. The government accounted that they justified the amount by scientific research referring to the carbon footprints."*

Students in Tokyo were asked the same survey in Japanese with "£50" replaced by "Yen 10,000" and UK replaced by "Japan" or "Japanese". £50 or Yen 10,000 is believed to be substantial for students, imposing some infringement on freedom, but still affordable. The statement "after a long debate with several economists and scientists" provided sufficient divergence in the perceived effectiveness. The fact that all residents are asked to pay further was perceived as fair by some, whereas others thought such a tax should be based on income or actual CO₂ emissions. All questions were asked on a 7 point Likert scale. The surveys were conducted in paper form asking students at the end of classes to take 15min filling in the survey. The Japanese surveys were conducted at Tokyo Institute of Technology in October 2008 whereas the students in London at Imperial College London where asked in November 2008. Students from all grades were included in the survey. With regards to the second hypothesis for this study we ignored all foreign students leaving us with a valid sample of 83 students from Imperial College London and 141 students from Tokyo Institute of Technology.

To measure the belief in absolute following seven questions were asked:

- I think there is an objective truth in the world.
- I think there is an "authentic beauty" (in society and nature) which is true for all nations and all times.
- I think there is a "true justice" which is true for all nations and all times.
- There is no definite "authentic beauty" as the sense of beauty differs between individuals, where they live, their culture and time.
- I think that humans will be judged according to how they live.
- *There are no definite standards of justice as it depends on the background of an individual, where they live, their culture and time.
- * There is no truth publically (in the world) as people take things according to their own understanding.

Analysis of consistency between the questions using Cronbach's alpha showed an acceptable value of 0.701 among the Japanese sample, among the British sample the value is lower with 0.543. Removing any single or two questions does not lead to a significant improvement in the consistency of the latent construct "Belief in Absolute". This difference in the reliability between the two sets of samples is noteworthy. It suggests that in Britain the construct belief in absolute is more difficult to measure. One explanation might be that ideas of absoluteness of beauty, morality and religious beliefs are kept more separate nowadays in Western culture. The following will however show that despite the low alpha the analysis leads to some significant results. The questions regarding acceptance and attitudes towards government as well as the proposed scheme were asked fairly straightforward.

4. Analysis and Results

Our analysis shows that there is a similar mean acceptance of the scenario among the Japanese and the British sample (Table 2). The slightly higher acceptance in the Japanese sample is not statistically significant. The standard variation is fairly large, allowing to pick up differences in acceptance through our independent variables. Interestingly fairness of scenario and distributive fairness are much higher among the Japanese sample, indicating that possibly in the British sample concerns that the tax should be dependent on actual carbon footprints are more prevalent. Procedural fairness on the other side is significantly larger in the British sample suggesting that the Japanese sample is more concerned about the way the government came to this decision. Whereas the differences in infringement on freedom and trust in government are both insignificant, social problem awareness, self problem awareness, egoistic problem awareness and perceived effectiveness are significantly higher in the Japanese sample. The reasons for this are not clear. Fujii et al (2007) also did not find any significant difference between absolute or relative importance of environmental concerns between Japanese, Taiwanese and Swedish citizens.

Table 1: Mean and Std Dev. of attitudes and belief in absolute

	British	Japanese	t-test
Acceptance	3.05 (1.62)	3.21 (1.62)	-0.62
Fairness of scenario	2.67 (1.74)	3.48 (1.63)	-3.46
Procedural fairness	3.57 (1.62)	2.88 (1.53)	2.25
Distributive fairness	2.99 (1.61)	3.48 (1.56)	-3.10
Infringement on freedom	3.99 (1.80)	3.54 (1.79)	1.80
Trust in government	3.23 (1.42)	3.33 (1.42)	-0.41
Social problem awareness	5.31 (1.56)	5.72 (1.14)	-2.12
Self problem awareness	4.40 (1.75)	5.16 (1.42)	-3.51
Egoistic problem awareness	3.51 (1.83)	4.51 (1.61)	-4.28
Perceived effectiveness	3.28 (1.80)	4.23 (1.54)	-4.19
Belief in absolute	4.14 (0.78)	3.96 (1.01)	1.32

To understand the importance of the factors on acceptance we construct a linear regression analysis (Table 2). We find that all factors have the expected sign. Fairness is significant in both samples. Trust in government and social problem awareness are more significant in the Japanese sample but procedural fairness, self problem awareness and perceived effectiveness are more significant in the British sample. Belief is not significant among all samples nor in any country specific regression. Table 3 though shows that there is a significant correlation between acceptance and belief in absolute in the British sample. This suggests that the effect of belief in absolute is explained through the other factors as hypothesised. This is confirmed by the last two columns in Table 2. The country dummy becomes more significant if belief in absolute is omitted though because belief is not significant in our regression this result is not very strong. The model fit is better in the British sample, suggestion that the established psychological factors explain acceptance better in Britain than in Japan.

Table 2: Linear regression analysis (significant factors in bold, t-values in brackets)

	All	British only	Japanese only	All; incl. dummy and belief	All; incl. dummy
Constant	-0.37 (-0.65)	0.59 (0.64)	-0.85 (-1.13)	-0.52 (-0.90)	-0.51 (-1.11)
Fairness of Scenario	0.32 (5.45)	0.32 (3.44)	0.26 (3.02)	0.36 (5.87)	0.37 (6.42)
Procedural Fairness	0.10 (1.62)	0.26 (2.59)	0.06 (0.80)	0.11 (1.69)	0.11 (1.77)
Distributive Fairness	0.06 (1.16)	-0.10 (-1.28)	0.15 (1.91)	0.02 (0.42)	0.02 (0.17)
Infringement	-0.11 (-2.32)	-0.17 (-2.30)	-0.07 (1.18)	-0.12 (-2.47)	-0.12 (-2.58)
Trust in government	0.27 (3.78)	0.02 (0.14)	0.42 (4.43)	0.25 (3.51)	0.24 (3.51)
Social problem awareness	0.27 (3.08)	0.25 (2.38)	0.32 (2.38)	0.25 (2.87)	0.24 (2.90)
Self problem awareness	-0.15 (-2.11)	-0.18 (-1.97)	-0.09 (-0.80)	-0.13 (-1.81)	-0.12 (-1.70)
Egoistic problem awareness	0.22 (0.37)	0.03 (0.38)	-0.02 (-0.21)	0.04 (0.72)	0.04 (0.73)
Perceived Effectiveness	0.13 (2.28)	0.27 (3.18)	0.05 (0.65)	0.15 (2.68)	0.16 (3.04)
Belief in Absolute	0.03 (0.36)	0.04 (0.22)	-0.04 (-0.36)	0.01 (0.11)	
Country dummy (British = 1)				0.41 (2.16)	0.50 (2.83)
R ²	0.562	0.735	0.526	0.572	0.572

Table 3 shows that belief in absolute has significant correlation to several psychological factors and acceptance in British sample but not in the Japanese sample. In particular to government related factors: fairness, procedural fairness, effectiveness and trust in government. That is fairness and procedural fairness are in principal also related to trust in government if one trusts in government one will also more likely perceive a policy to be fair and effective.

Table 4: Correlation between belief in absolute and other factors (bold: significant on 5% level; bold *: significant on 1% level)

	Japanese	British
Acceptance	0.06	0.37*
Fairness	-0.01	0.39*
Proc. Fairness	0.07	0.43*
Distr. Fairness	0.02	0.20
Infringement	-0.10	-0.18
Trust in Gov.	0.13	0.30
Social Pro. Awa.	0.11	0.00
Self Pro. Awa.	0.10	-0.08
Egoistic Pro. Awa.	0.04	-0.11
Effectiveness	0.14	0.35*

To better illustrate the effect of belief in absolute we perform a two step regression model for both samples with only government related psychological factors and belief in absolute as deeper factor. We omit factors related to the problem itself such as the three forms of problem awareness (social, self, egoistic) as well as factors related on the impact on oneself (infringement on freedom). The reason is that we hypothesised the effects of absolute also only authority or government related factors. Figure 1 then shows the before discussed significant difference between our two samples. The R² of acceptance for the British sample is 0.704 but for the Japanese sample only 0.5. This shows that belief in absolute and government related factors can explain acceptance in UK better than in Japan.

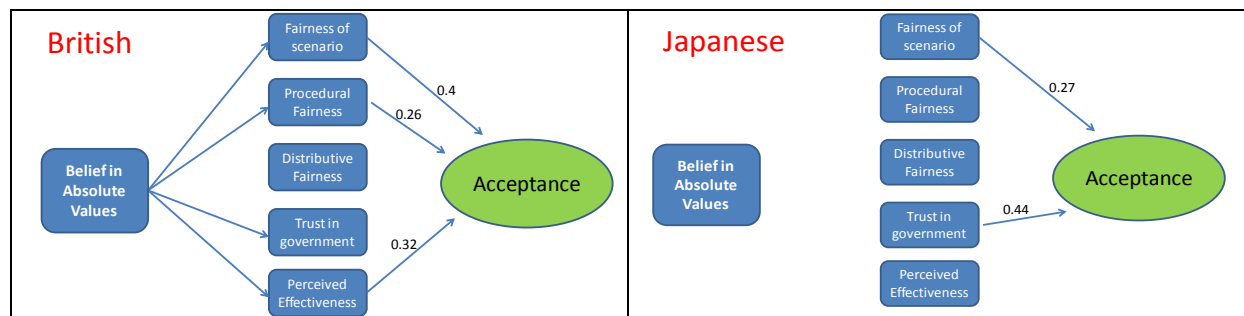


Figure 1: Comparison of the effect of “belief in absolute” on other determinants among British and Japanese students

4. Conclusions, implications and further work

We find that fairness of scenario and social problem awareness are among the most important factors for acceptance. Self problem awareness and infringement on freedom are more significant in the British sample. Further, whereas trust in the policy introducing government per se is more important in Japan, in Britain it is not the general trust in the government but scheme specifics such as procedural fairness and effectiveness. These factors can be explained by belief in absolute, in other words those who believe in absolute values are more willing to consider the specifics of a scheme and then accept it, possibly because they are more willing to consider the general social welfare.

Our hypothesis that belief in absolute can explain the acceptance of coercive policies is rejected in Japan, but accepted in Britain. A possible explanation might be that absolute beliefs are well compatible with the Christian background in U.K, but not well compatible with Buddhism/Confucism. Our findings have important implications. Firstly, for coercive policies such as road pricing it is difficult to gain acceptance without considering various aspects of fairness, in particular “procedural”. Therefore it is important for decisions makers to explain the implications of do-nothing policies as well as how decisions were derived. Secondly, it is difficult to get acceptance for coercive policies in a postmodern society in which everything becomes relative. Further work should extend the sample size beyond our limited sample of students, possibly reconsider the measurement of belief in absolute, as well as investigate other deeper factors such as “arrogance” as discussed in Hatori and Fujii (2008)¹².

References

- 1) Bamberg, S., Rölle, D., 2003. Determinants of people’s acceptability of pricing measures: replication and extension of a causal model. In: Schade, J., Schlag, B. (Eds.), *Acceptability of Transport Pricing Strategies*. Elsevier, Oxford, pp. 235-248.
- 2) Biel, A. and Thøgersen (2003) The interaction of values and norms to promote sustainable consumption and production *Proceedings of the 1st International Workshop on Sustainable Consumption*, 91-98.
- 3) Fujii, S. Gärling, T., Jakobsson, C. and Jou, R.C. (2004) A cross-country study of fairness and infringement on freedom as determinants of car owners’ acceptance of road pricing, *Transportation*, **31**, (3), pp. 285-295.
- 4) Fujii, S. (2006) Environmental concern, attitude toward frugality, and ease of behavior as determinants of pro-environmental behavior intentions, *Journal of Environmental Psychology*, 26, pp. 262-268.
- 5) Jakobsson, C., Fujii, S., Gärling, T., 2000. Determinants of private car users’ acceptance of road pricing. *Transport Policy* 7 (2), 153-158.
- 6) Lind, E. A., & Tyler, T. R.: *The Social Psychology of Procedural Justice*. Plenum Press, New York, 1988.
- 7) Loukopoulos, P. Jakobsson, C., Gärling, T. Schneider, C.M. and Fujii, S. (2005) Public Attitudes towards Policy Measures for Reducing Private Car Use, *Environmental Science & Policy*, **8**, pp. 57-66.
- 8) Schade, J., Schlag, B. (Eds.), *Acceptability of Transport Pricing Strategies*. Elsevier, Oxford,
- 9) Schmöcker, J.-D., Fonzone, A., Quddus, M.A., and Bell, M.G.H. (2006) Changes in the frequency of shopping trips in response to congestion charge. *Transport Policy*, 13 (3), 217-228.
- 10) Yamagishi, T. (1986) The structural goal/expectation theory of cooperation in social dilemmas. In E. Lawler and B. Morkovsky (Ed.), *Advances in Group Processes*, Vol. 3., Greenwich, CT: JAL, 52-87.
- 12) Hatori, T. & Fujii, S. (2008) The mass man as defector: Implications of Ortega’s “the rebellion of the masses” on social dilemma research, *International Journal of Psychology*, 4 (3), pp. 495.