

Spring 4-11-2011

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Recommended Citation

Connolly, Regina, "Technology Adoption, National Culture & Trust Beliefs" (2011). *UK Academy for Information Systems Conference Proceedings 2011*. 12.

<http://aisel.aisnet.org/ukais2011/12>

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TECHNOLOGY ADOPTION, NATIONAL CULTURE & TRUST BELIEFS

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ABSTRACT

Studies of e-commerce have raised awareness of the importance of key issues such as trust and reputation in the online commercial environment. Trust is a social and psychological phenomenon that is widely acknowledged as contributing to many forms of exchange, including e-commerce exchanges. Due to the international nature of e-commerce, it is likely that the influence of culture may extend to online consumers' trust responses. This paper describes a study where a trust measurement instrument, previously validated in Hong Kong, is applied in both the United States and in Ireland – countries that differ in terms of individualism, uncertainty avoidance, and power-distance. The results provide a refined understanding as to the influence of national culture on the generation of online consumers' trust beliefs and thus make a valuable contribution not only to information systems and diffusion research but also to online vendors in their attempts to engender consumer trust in their websites.

Keywords: Trust, Electronic Commerce, National Culture.

1.0 INTRODUCTION

Understanding the predictors and dynamics of consumer trust is an issue of enduring interest for both researchers and practitioners. The former seek to understand the antecedents of trust whilst the latter seek to develop effective marketing strategies that will reduce perceived risk and engender trust beliefs in consumers. That interest derives from the understanding that trust is integral to transactions and its absence creates a chain reaction that manifests in lost sales, damage to reputation and market share gains to competitors. In a commercial world that is becoming increasingly commoditised, consumer trust is the defining factor that characterizes winners, and in its absence, losers. As Hacker, et al., (2002; 1) point out “*Trust is not an option in the success formula; it is an imperative.*” This has never been more true than in the online exchange context, a context that is characterized by perceived risk, lack of control and increased consumer vulnerability. Trust is consequently viewed as crucial for the success of eCommerce

(Koufaris et al. 2002) and it confers rich rewards. As Rajiv Dutta, eBay's chief financial officer notes, “[At eBay] we do \$2.25 billion worth of gross sales a quarter entirely on trust” (Anders 2001).

2.0 TRUST & CULTURE

Trust is a social and psychological phenomenon that has been studied as a personality trait, as a social tie between actors, as an emergent property of a mutual exchange, and as a feature of a community as a whole (Chopra and Wallace, 2003). In this study, trust is viewed from an interpersonal perspective and is defined as an attitude of confidence directed towards the online vendor that may be influenced by the personality of the trustor and the attributes of the trustee (Mayer *et al.* 1995). The literature provides considerable evidence that a number of factors have strong predictive importance and are therefore deserving of consideration in any examination of trust. These factors include the characteristics of the online vendor (Chen and Dhillon, 2003; Bhattacharjee, 2002; McKnight *et al.*, 2002), third party certification (McKnight and Chervany, 2001; Hoffmann *et al.*, 1999; Jarvenpaa and Grazioli, 1999), the individual's propensity to trust (Kim and Prabhakar, 2004; Lee and Turban, 2001), a personality characteristic (Gurtman, 1992) and the influence of perceived risk (Verhagen *et al.*, 2006; 2004; Pavlou and Gefen, 2004; Van der Heijden *et al.*, 2003). In choosing a model to conduct the study it was therefore of particular importance that each of these constructs were adequately represented. The influence of national culture on trust beliefs and trust outcomes has long been asserted (Gefen and Heart, 2006; Gefen *et al.*, 2004; Doney *et al.*, 1998). However, Gefen and Heart (2006) note that despite repeated theorisations of trust and national culture as intricately related constructs, e-commerce trust researchers have for the main part ignored the potential effects of national culture. They note that the majority of e-commerce trust research has been conducted in the United States, a country that exhibits high levels of individualism and uncertainty avoidance (Hofstede, 1980) and argue that conclusions based on studies conducted in one country cannot and should not be automatically applied to other cultures.

The four dimensions of national culture as identified by Hofstede (1980) are individualism-collectivism, power distance, uncertainty avoidance, and masculinity. The first of these, individualism (IDV), is described by Hofstede as the degree to which individuals are

integrated into groups. On the individualist side are societies in which the ties between individuals are loose: everyone is expected to look after him/herself and his/her immediate family. The opposite to this is collectivism which comprises societies in which people from birth onwards are integrated into strong, cohesive groups often extended families (with uncles, aunts and grandparents) which continue protecting them in exchange for unquestioning loyalty. In a collectivist society individuals tend not to trust strangers (Fukuyama, 1995). On the other hand, in an individualist culture trust of strangers tends to be higher. The second dimension is the Power Distance Index (PDI) which is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally. This represents inequality (more versus less), but defined from below, not from above. It suggests that a society's level of inequality is endorsed by the followers as much as by the leaders. Research (Shaffer and O' Hara, 1995) has shown that individuals from countries that with high PDI scores tend to have less trust for service providers than do individuals.

The third dimension of national culture that Hofstede discusses is the Uncertainty Avoidance Index (UAI). This dimension deals with a society's tolerance for uncertainty and ambiguity and indicates to what extent a culture programs its members to feel either uncomfortable or comfortable in unstructured situations. Uncertainty avoiding cultures try to minimize the possibility of such situations by strict laws and rules, safety and security measures. The opposite type, uncertainty accepting cultures, are more tolerant of opinions different from what they are used to; they try to have as few rules as possible, and on the philosophical and religious level they are relativist and allow many currents to flow side by side. The fourth of Hofstede's cultural dimensions is masculinity. Masculinity (MAS) refers to the distribution of roles between the genders, which is another fundamental issue for any society to which a range of solutions are found.

3.0 Measurement Instrument

Comprehensive reviews of all trust studies and trust models were undertaken and a number of models were found to address many of the key issues of concern in this study (e.g. Kini and Choobineh, 1998; Tan and Thoen, 2000-2001; and Egger, 2000). However, the model deemed to be the most suitable for the purposes of this study was that proposed by Cheung and Lee (2000) as it captures the most significant set of trust antecedents, derived from

different lines of previous research, and presents them as an integrated entity that can provide direction for empirical testing. For example, the measurement instrument contains 30 items measuring trust antecedents such as perceived security controls, perceived privacy controls, the vendors perceived integrity, the vendors perceived competence, personality, cultural environment, experience, third party recognition, legal framework, and perceived risk.

In their model (figure 1) Cheung and Lee show that consumer trust in on-line shopping is predicted by two sets of antecedents – factors that create a sense of vendor trustworthiness and factors related to the external environment. The former relate to the vendor’s perceived integrity and competence and the vendor’s security and privacy controls. The latter (external environment) encompass third party recognition (e.g. seals of approval) and the legal framework. The model shows that the effect of both sets of factors on the consumer’s trust beliefs is moderated by the consumer’s propensity to trust. It also acknowledges the relationship between perceived risk and the online consumer’s trust response.

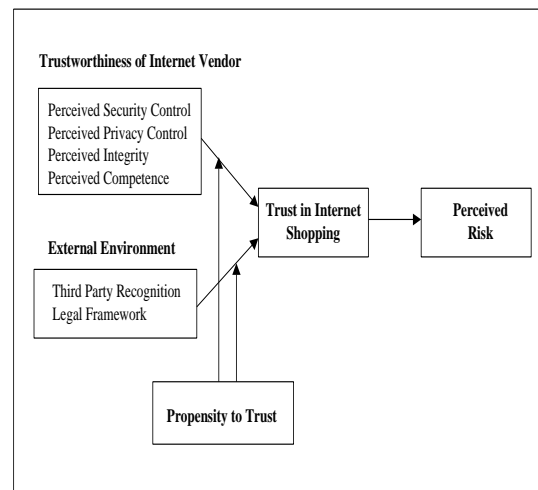


Figure 1. A Conceptual Model of Trust in Internet Shopping: (Cheung & Lee, 2000)

The model was developed and validated in Asia (Hong Kong), a country that exhibits very low levels of individualism, has a high rank on the power distance index and low levels of uncertainty avoidance. These scores are in marked contrast to those of the United States and Ireland. For example, the US shows a very high individuality index with a score of 91.

Ireland, on the other hand, scores about 70 on the individualism index while Hong Kong scores markedly lower with a score of only 25. The PDI score for Hong Kong is high at 68 while the same score for the US is 40 (in a 11- 104 scale) but Ireland scores only 28 on this ranking. In terms of the UAI index, the U.S ranks low at 46 (in an 8-112 scale) but Ireland ranks far lower at 35 with Hong Kong lowest at a score of only 29. This indicates that Hong Kong consumers and Irish consumers tend to be more tolerant of uncertain situations than are Americans. As all three countries are similar in the masculinity index with Hong Kong at 57, the US at 62 and Ireland at 68, masculinity is not hypothesised as an aspect of national culture that could provide an explanation for differences in trust beliefs between these countries. In addition, it should be noted that while the US and Ireland are by no means polar opposites on each of the cultural indices, differences between them are evident in terms of three of the four indices, in particular the individualism index and to a lesser degree the power-distance and uncertainty avoidance indices.

The hypothesized effects of national culture on online consumer's trust beliefs will be examined by comparing the same model developed and validated in Hong Kong with data collected in the US and Ireland. If regardless of national culture the trust antecedents are similar, this points to the culture independence of the model. However, if the results differ markedly, this confirms the concerns of researchers (e.g. Fukuyama, 1995) regarding the generalisation of US trust studies.

4.0 Methodology

The measurement instrument proposed by Cheung and Lee was extended to include demographic information and was applied to two sets of samples in both Ireland and the United States. In each country, one set of respondents had less technical backgrounds and the other set had highly technical backgrounds. For the Irish section of this study, the first sample was obtained from the Irish Master of Business Administration (MBA) Association. It consisted of 255 individuals who completed an MBA degree in the preceding 10 years and were graduates of six universities in Ireland. In the United States, the first sample chosen for this study was obtained from two postgraduate classes at Northeastern University Boston and comprised 75 individuals.

For the Irish section of the study, the second sample was obtained from the Irish Computer Society (ICS) and consisted of 218 consumers with highly technical backgrounds. To

become a professional member of the Irish Computer Society necessitates having a degree in a technical discipline along with a minimum of 3 years work experience in a technical or technical-related position. These requirements will improve the likelihood that the respondents will have adequate disposable income and technical competency to engage in online shopping. However, it is reasoned that an individual could have recently joined the ICS but that their technical knowledge could be considerably outdated (which would reduce their knowledge and experience of online shopping). To overcome this potential limitation, an age limit of 45 years of age was imposed on the participants selected. For the United States section of the study, the second sample consisted of employees of the Computer Services department at a major east coast university in the United States. These employees by nature of their occupation are highly technical in both their educational background and level of technical skill. This sample comprised 35 individuals.

5.0 Results

Appendix A shows the Cronbach's alpha values for each of the constructs. The three constructs of 'Personality', 'Experience' and the 'Legal Framework' worked particularly well with both samples. However, checks for internal reliability showed the 'Perceived Security', 'Perceived Privacy', and 'Cultural Environment' constructs to have scores of less than 0.65 for both samples. As the 'Perceived Security' construct is composed of only 2 items, this is likely to contribute to the low reliability measure for that construct.

The measure for the 'Cultural Environment' construct (which consists of only 2 items) was low at 0.263 for the Irish sample and at 0.252 for the US sample. In a previous test of this measurement instrument, Borchers (2001) also reported a low measure (0.5307) for the 'Cultural Environment' construct. Borchers concluded that his use of a sample consisting of multiple ethnicities might have confounded his results. However, the Irish section of the research was composed of predominantly Irish respondents. Therefore, conflicting interpretation of items due to the respondents' multi-ethnicity does not explain the lack of a good measure for this construct. It may be that the high alpha result that Cheung and Lee (2000) obtained for the 'Cultural Environment' construct is particular to the Chinese environment¹ and that the respondents in their study were influenced by elements unique to that environment.

¹ Cheung and Lee's measurement instrument was developed in Hong Kong.

Nonetheless, as both samples has three constructs showing scores of less than 0.65, it was decided that the nature of the variables i.e. their relationships with each other and their relationship with the response variable (trust) should be examined more closely. In order to test construct validity, principal components analyses were conducted for each sample.

The principal components analysis of the data set obtained from the Irish sample resulted in a number of significant changes to item associations. The original eleven factors were reduced to eight. Five factors remained unchanged: 'Perceived Security, Perceived Competence, Experience, Third Party Regulation and Legal Framework. The three constructs containing new item associations were subjected to a new reliability test. The reliability analysis showed that the three constructs containing new item associations i.e. 'Perceived Integrity', 'Personality' and 'Trust in Internet Shopping' worked particularly well with this sample. When a principal components analysis was applied to the data set obtained from the US sample a number of significant changes to item associations also resulted with only three factors remaining unchanged: 'Perceived Competence, Third Party Regulation and Experience. As was the case for the Irish sample, the items that comprised the Personality and Culture constructs loaded strongly together as did the items that comprised the trust and risk constructs. However, unique to this sample, the items that comprised the legal framework construct merged with those that comprised the Perceived Security construct. (The implication of this is that it would not be possible to measure the influence of the Legal Framework variable on Trust for this sample.) The constructs containing new item associations were then subjected to a new reliability test and showed far stronger results. Having secured stronger reliability measures for the variables that had previously caused some concern, the relationship between the Trust construct and the variables that are considered to influence its formation were measured using Pearson correlation techniques. The correlation coefficient results for the Irish and US samples are outlined in appendices B and C respectively.

The coefficient results show that a positive relationship exists between trust and the independent variables. For the Irish sample, the strongest results were provided by the Perceived Integrity and Perceived Competence variables confirming the importance of the perceived characteristics of the vendor (as mediated by the technology), in generating trust beliefs. The correlation coefficient result for the relationship between 'Experience' and

Trust was notably stronger than was the result for the relationship between ‘personality’ (i.e. tendency to trust) and Trust indicating that the Irish consumer’s experience of the on-line purchase environment exerts a stronger influence on the formation of their trust beliefs than does their tendency to trust. The strongest result for the US sample was provided by the Experience variable. While the relationship between trust and the characteristics of the vendor (i.e. Perceived Security, Perceived Integrity and Perceived Competence) was stronger than that shown by other variables, the relationship between trust and experience was remarkably stronger.

In the model proposed by Cheung and Lee (2000) the moderating variable ‘Propensity to Trust’ is a composite of two sets of items. These are (1) *Personality*: items relating to the individual’s tendency to trust and (2) *Experience*: items relating to the individual’s previous experience. In this study, these sets of items have been treated separately in order to examine their effects more closely. Two tests were therefore conducted, the first controlling for personality items (i.e. the respondent’s tendency to trust) and the second test controlling for experience. The results of these tests are shown in table 4. The variable providing the strongest result is the perceived integrity variable. The coefficient result for this variable is stronger when controlling for personality than when controlling for experience, indicating that the individual’s on-line experience has a greater influence on their perceptions of web vendor integrity than does their tendency to trust.

Multiple regression techniques were then used to establish whether the set of independent variables could explain a proportion of the variation in the dependent variable at a significant level, and to establish the relative predictive importance of the independent variables. The results, outlined in table 5, showed that the independent variables explain 40% of the variation in trust for the Irish sample and 36% of the variation in trust for the US sample.

IRISH SAMPLE		US SAMPLE	
R Square	Adjusted R Square	R Square	Adjusted R Square
.413	.394	.378	.361

Predictive Variables:

Perceived Competence, Personality,
Third Party Regulation, Legal
Framework, Experience, Perceived
Security Control, Perceived Integrity.

Table 1. Regression Analyses: Model Summary

The coefficient results obtained for the Irish sample indicate that two of the independent variables - perceived integrity (coefficient beta weight 0.239) and experience (coefficient beta weight 0.227) - exert the strongest effect on the dependent variable. Perceived security and perceived competence are significant independent variables – but to a lesser degree. Each of these four variables is positively related to the dependent variable. Age also has significant predictive importance but is a negatively related variable. (The coefficient results are outlined in appendix D).

We failed to reject the null hypothesis that the true coefficient value of third party recognition, legal framework, and personality are zero at the 0.05 level. In the case of all other variables, it is possible to be confident at a 0.05 level that they do have significant explanatory powers.

When the coefficient results obtained for the US sample are examined it is clear that perceived security (coefficient beta weight 0.257) and experience (coefficient beta weight 0.269) exert the strongest effect on the dependent variable. Perceived integrity has predictive value – but to a lesser degree. Each of these variables is positively related to the dependent variable. (The full coefficient results are outlined in appendix E.)

We failed to reject the null hypothesis that the true coefficient value of third party regulation, personality and perceived competence are zero at the 0.05 level. In the case of all other variables, it is possible to be confident at a 0.05 level that they do have significant explanatory powers.

In order to ascertain whether there was any evidence of multicollinearity among the predictor variables in this study a number of studies were conducted. As the highest correlation coefficient results was 0.53 for the Irish sample and 0.66 for the US sample this is the first indication that the results are not influenced by multicollinearity. As reliance on correlation coefficients alone may miss linear combinations among the independent variables that could also give rise to multicollinearity, a Variance Inflation Factor (VIF) was also computed. However, the highest VIF for the Irish sample was 1.775 (associated with Perceived Integrity) and 1.635 for the US sample again indicating that the regression results are not influenced by multicollinearity. Finally, the condition number for the data used in this regression analysis was found to be only 32 for the Irish sample and 26 for the US sample. In summary, there is no evidence that multicollinearity among the predictor variables used in this study has influenced the regression results. In fact, there is strong evidence to the contrary. Consequently, the regression results can be interpreted with confidence.

6.0 Discussion

The results of this study show only partial support for the Cheung and Lee model. For example, the results obtained from the Irish sample shows some support for the hypotheses that certain characteristics convey a perception of vendor trustworthiness and thus are significant antecedents of trust beliefs. The factor that showed the strongest predictive relationship with trust beliefs is perceived integrity (combining privacy). While perceived vendor competence and perceived security showed some association with trust beliefs, it was to a far lesser degree than either of these variables. Experience was the variable with the second strongest influence on the trust response. Relationships between other factors and trust were insignificant or negative. For example, the relationship between the external factors (third party recognition and legal framework) and trust was remarkably weak. Similarly, the results obtained for the US sample provide limited support for the hypotheses that trust-related vendor characteristics predict the online consumer's trust response. While the results for this sample show that perceived security does influence consumer trust in online shopping, it must be borne in mind that that variable is an equal composite of security items and legal framework items. Moreover, this sample showed a very strong relationship between experience and the online consumer's trust response.

In marked contrast to Cheung and Lee's model, the personality construct did not appear to moderate the relationships between the variables and trust for either sample. A previous test of this model (Borchers 2001: USA) also found that the propensity to trust construct did not have any impact on the relationships between the independent variables and trust. This research supports Borchers' original conclusion. However, when the items comprising the propensity to trust (tendency to trust and experience) are treated separately, experience was shown to have very strong predictive power across both samples – in fact it was the variable with the second strongest predictive influence on trust beliefs for both samples.

The implication of these findings is that web vendors seeking to be successful in the Irish marketplace should focus on ensuring that they convey a perception of integrity. This can be achieved by providing clearly defined terms and conditions regarding the transaction and by providing customers with guarantees that their rights are protected. US consumers value evidence of security mechanisms and therefore web vendors should ensure that security of transactions on their websites is emphasised to the online consumer. The management of both of these factors is within the control of the vendor.

While the factor that is the strongest predictor of consumers' perceptions of vendor trustworthiness differed across the samples, one point of commonality that emerged relates to the importance of experience as a predictor of trust beliefs. For both samples, experience was the variable with the second strongest predictive influence on trust beliefs. For the Irish sample it had greater predictive effect on the generation of trust beliefs than did perceptions of vendor competence. This means that not only is experience a strong predictor of Irish consumers' trust beliefs, but it is more influential than perceived competence and stronger than security controls. For the US sample, experience had greater predictive effect on the generation of trust beliefs than did perceptions of vendor integrity or competence. The fact that experience exerts greater influence on customers' trust beliefs is not surprising. The on-line purchase environment is fraught with risk and a negative on-line transaction experience would undoubtedly influence subsequent beliefs regarding that environment. However, the fact that experience is a stronger predictor of trust beliefs than perceived security controls for the Irish sample and a stronger predictor of trust beliefs than perceived integrity or perceived competence for the US sample is highly significant and has two main implications. Firstly, it indicates the need to ensure that each

customer's transaction experience is satisfactory and that they view their experience of the website interaction positively. However, as it is not possible to anticipate the concerns of every customer, it is essential to have some measures in place that will overcome this problem and increase the perception of the on-line transaction as a positive experience. Enabling the consumer to communicate with the vendor's customer service representatives is one means of addressing the consumer's concerns, reducing perceived risk and ensuring a positive outcome. Secondly, it points to the value of peer referrals. Web vendors should use incentive schemes to encourage referrals from satisfied customers. These schemes reward customers when they refer other customers who subsequently purchase from the on-line vendor. Vendors should also provide review sections on their websites and provide a peer ranking system. This allows potential customers to see how the vendor is rated by customers who have previously purchased from that vendor. These features provide the prospective on-line shopper with evidence that other consumers who purchased from that vendor experienced a positive outcome. Consequently it encourages them to believe that should they purchase from that vendor, their experience will be equally positive.

One question that remains is whether the results obtained in this study indicate that Cheung and Lee's model is intrinsically wrong or whether Irish and US on-line consumers are different from Hong Kong/Chinese consumers in terms of the factors that predict their trust response in an on-line purchase context. The present research found that many of the relationships proposed by the Cheung and Lee model were weak or not significant. For example, the moderating influence of the propensity to trust construct did not have a significant influence on Irish or US on-line consumers' trust response. Similarly, third party regulation did not influence Irish or US on-line consumers' trust response to any significant degree. Therefore, it appears that the model proposed by Cheung and Lee contains significant weaknesses, lending weight to the argument that conclusions based on studies conducted in one country cannot and should not be automatically applied to other cultures.

7.0 Conclusion

The aim of this study was to provide increased insight into the nature of the trust construct as observed in the behaviour of users and potential users of online shopping. It is the first

large-scale empirical study of its kind comparing the antecedents of consumer trust in online shopping in Ireland and the United States, thereby providing insight into the influence of national culture on the antecedents of consumer trust in online shopping. The results of this study provide a valuable contribution to information systems research and to the overall body of marketing, trust and diffusion research whilst also providing practitioners with the insights necessary to help them improve consumer trust in their websites.

APPENDICES

Appendix A: Reliability Analysis – Scale (Alpha)

Construct	Number of items	Cronbach's Alpha Ireland	Cronbach's Alpha USA	Cronbach's Alpha Cheung & Lee (2000)
Perceived Security Control	2	0.625	0.546	0.794
Perceived Privacy Control	3	0.624	0.611	0.810
Perceived Integrity	2	0.687	0.663	0.764
Perceived Competence	3	0.685	0.680	0.846
Personality	4	0.886	0.872	0.881
Cultural Environment	2	0.263	0.252	0.833
Experience	3	0.887	0.879	0.880
Third party recognition	3	0.700	0.695	0.795
Legal Framework	2	0.797	0.762	0.882
Trust in Internet Shopping	3	0.6538	0.666	0.860
Perceived Risk	3	0.7262	0.711	0.864

Appendix B

Correlation Coefficient Results: Irish Sample

Correlations Irish Sample	1	2	3	4	5	6	7	8
(1) Trust	1.00	0.39	0.49	0.45	0.41	0.19	0.34	0.27
(2) Perceived Security		1.00	0.44	0.34	0.28	0.25	0.31	0.10
(3) Perceived Integrity			1.00	0.43	0.28	0.22	0.53	0.26
(4) Perceived Competence				1.00	0.35	0.23	0.27	0.24
(5) Experience					1.00	0.20	0.11	0.24
(6) Third Party Recognition						1.00	0.26	0.20
(7) Legal Framework							1.00	0.27
(8) Personality								1.00

Appendix C

Correlation Coefficient Results: US Sample

Correlations (US sample)	1	2	3	4	5	6	7
(1) Trust	1.00	0.47	0.47	0.41	0.66	0.20	0.31
(2) Perceived Security		1.00	0.56	0.33	0.07	0.30	0.32
(3) Perceived Integrity			1.00	0.47	0.04	0.21	0.29

(4) Perceived Competence				1.00	0.35	0.23	0.20
(5) Experience					1.00	0.22	0.01
(6) Third Party Recognition						1.00	0.21
(7) Personality							1.00

Appendix D.

Predictive Importance of Independent Variables: Irish Sample

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.257	.311		.826	.410
	Perceived Security Control	.150	.054	.154	2.765	.006
	Perceived Integrity	.293	.079	.239	3.700	.000
	Perceived Competence	.189	.059	.181	3.211	.001
	Experience	.235	.055	.227	4.238	.000
	Third Party Regulation	-8.77E-02	.058	-.078	-1.516	.131
	Legal Framework	8.120E-02	.060	.079	1.350	.178
	Age	-.136	.050	-.134	-2.704	.007
	Personality	7.841E-02	.050	.081	1.562	.120

a. Dependent Variable: Trust

Appendix E.

Predictive Importance of Independent Variables: US Sample

Coefficients^a

Model		Unstandardize Coefficient		Standardize Coefficient	t	Sig.
		B	Std.	Beta		
1	(Constant)	.055	.315		.175	.862
	Perceived Security	.314	.079	.257	3.975	.000
	Perceived Integrity	.246	.083	.203	2.972	.003
	Perceived Competence	.137	.067	.130	2.052	.041
	Personality	.045	.055	.046	.820	.413
	Third Party Regulation	-.037	.066	-.032	-.561	.576
	Experience	.253	.060	.249	4.230	.000

Dependent Variable: Trust

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