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LETTER FROM THE EDITOR

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ATTITUDES TOWARD TAX EVASION: A DEMOGRAPHIC STUDY OF SWITZERLAND

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ABSTRACT

A number of studies have examined the relationship between tax collection and various demographic variables. However, until recently most of those studies have involved a United States sample population. The Internal Revenue Service provides demographic data for researchers on a regular basis. The present study goes beyond those studies in several important ways. For one, it uses data on Switzerland taken from the World Values database. Not much work has been done on the Swiss tax or public finance system. Thus, the present study expands on the very limited research done on Swiss public finance.

The present study expands on existing literature in at least two other ways as well. For one, it examines how various demographics interact with attitudes toward tax evasion. Secondly, we examine several demographic variables that were not examined in prior studies.

One of the questions in the World Values database asked whether it would be justifiable to cheat on taxes if it were possible to do so. Respondents were asked to choose a number from 1 to 10 to indicate the extent of their support for tax evasion. This study examines those responses, both overall and through the prism of more than 20 demographic variables. A trend analysis is also done to determine whether Swiss attitudes regarding tax evasion have changed in recent years. A comparison is made with other ethical issues to determine the relative seriousness of tax evasion.

The study found that attitudes toward the justifiability of tax evasion often do differ by demographic variable. Tax evasion was found to be a less serious offense than claiming government benefits to which you are not entitled, taking a bribe, wife beating, and avoiding a fare on public transport and more serious than suicide, prostitution, abortion, euthanasia, divorce and homosexuality. The trend of opinion on the justifiability of tax evasion has been mixed since the first Swiss survey was taken in 1989. General attitudes became more acceptable toward tax evasion in the 1990s, then became far less acceptable toward the practice in the following decade.

Although the present study focuses on Switzerland, the methodology used in the present study could serve as a template for research on other countries or regions.

INTRODUCTION

Most prior studies on taxation have focused on public finance topics, such as how to collect taxes more efficiently, what kind of tax system a jurisdiction should have, what tax mix is best for raising revenue with minimal distortion, neutral taxation, and even optimal tax evasion. David Ricardo (1817/1996) was one of the first to provide a thorough analysis of public finance. Several subsequent writers have expanded on his work (Hyman, 1999; Kaplow, 2008; Marlow, 1995; Rosen, 1999). Musgrave (1959, 1986) and his wife (Musgrave & Musgrave, 1976) have written important books in the field. Musgrave and Peacock (1958) also edited a book that reprinted some of the classic works in public finance theory.

Musgrave's position is considered mainstream by European standards. He begins with the premise that a democratically elected government can adopt any kind of tax system it wants because the people who make the rules are the servants of the people. He supports the ability to pay principle and the graduated income tax. Others have challenged both the ability to pay concept (McGee, 1998a, 1999b, 2004, 2012) and the graduated income tax (Blum & Kalven, 1953; McGee, 1998a, 2004, 2012).

James Buchanan takes another approach to public finance. He believes that governments are limited even in a constitutional democracy and that they cannot justify imposing any tax they want merely because the country has a functioning democratic process (Buchanan, 1967, Buchanan & Flowers, 1975). He takes what may be called a Public Choice position, a position that has influenced other scholars (Cullis & Jones, 1998). Buchanan and Musgrave (2001) engaged in a friendly debate and published the results.

The present study takes a different approach. Although it recognizes the approaches of both Musgrave and Buchanan, it focuses on ethical aspects of tax evasion and the reasons that have been given to justify tax evasion in the past. Until recently, not much has been written on ethical aspects of tax evasion, and what has been written has been mostly from a U.S. perspective, partly because more information is available on the U.S. demographics than for most other countries (Bloomquist, 2003a&b; Internal Revenue Service, 1978, 1983).

That U.S.-centric slant to the tax evasion literature is starting to change, partly because other governments have started to release more information about tax evasion in their own countries and partly because the *World Values* surveys have solicited the opinions of people in dozens of countries on the issue of tax evasion. The present study uses the information gathered on Switzerland and analyzes it using more than 20 demographic variables, including some variables that other studies have not used. Although the present study relates to Switzerland, the methodology used in this study can be adopted as a template to use for studies of other countries and regions.

REVIEW OF THE LITERATURE

Although tax evasion has been a topic of discussion in the public finance literature, not much has been written about it from an ethical or philosophical perspective. However, a few things have been written about it.

Martin Crowe (1944), a Catholic priest, wrote his doctoral dissertation on the ethical duty to pay just taxes. He examined 500 years of Catholic literature on the subject, much of which was in the Latin language. His study is perhaps the most comprehensive treatise on the ethics of tax evasion written in the twentieth century. Crowe's work identified three basic positions on tax evasion – always ethical, sometimes ethical and never ethical – a theme that McGee (2006a) has explored.

Torgler (2003a) wrote an even larger dissertation on the subject, but his dissertation focused more on cultural, sociological, psychological and empirical aspects of tax evasion. Torgler (2007) has subsequently published a book on the topic, which takes the same perspectives as his doctoral thesis.

McGee (2004) has written a book on the philosophy of taxation and public finance that focuses on the ethics of tax evasion in places. He has also edited two books that focus primarily on the ethics of tax evasion (McGee, 1998a, 2012). Martinez (1994) has challenged the very legitimacy of taxes, as has Sabrin (1995). McGee (1994, 1998a&c, 1999a, 2004, 2012) has examined the question of when tax evasion is unethical and when it is not. Studies of tax evasion in Armenia found that people there do not pay taxes because it is easy to evade and because they do not think they have any moral duty to pay taxes to their government, which they view as wasteful and corrupt (McGee, 1999c, 2000).

Adams (1982, 1993) and Webber and Wildavsky (1986) have examined tax evasion in a historical perspective. They point out that tax evasion has been with us ever since the first ruler tried to extract tribute from his subjects. Block examined public finance texts in a failed attempt to find any justification for taxation. Perhaps he failed because public finance authors either begin with the assumption that taxation is justified or merely ignore the possibility that it might not be justified.

McGee constructed a survey instrument based on the Crowe (1944) thesis, which identified about 15 arguments that have been used over the centuries to justify tax evasion, and added three new arguments based on human rights abuses, and distributed the survey to various groups of students and others in several countries. The survey consisted of (usually) 18 statements that began with the phrase, "Tax evasion is ethical if ...". Participants were asked to select a number from 1 to 7 to indicate the extent of their agreement or disagreement with each statement.

Those studies examined several aspects of tax evasion from an ethical perspective. One thing that was done in each survey was to rank the arguments in terms of strength. Another thing that was sometimes done was to examine the responses based on several demographic variables,

such as gender, age, student major or status and sometimes race or ethnicity. Studies were conducted in Argentina (McGee & Rossi, 2008), Armenia (McGee & Maranjyan, 2006, 2008), Australia (Gupta & McGee, 2010b; McGee & Bose, 2009), Bosnia (McGee, Basic & Tyler, 2008, 2009), China (McGee & An, 2008; McGee & Guo, 2007; McGee & Noronha, 2008), Estonia (McGee, Alver & Alver, 2008), France (McGee & M'Zali, 2009), Guatemala (McGee & Lingle, 2008), Hong Kong (McGee & Butt, 2008; McGee, Ho & Li, 2008), New Zealand (Gupta & McGee, 2010a), Germany (McGee, Nickerson & Fees, 2006, 2009; McGee, Benk, Ross & Kiliçaslan, 2009), Kazakhstan (McGee & Preobragenskaya, 2008), Macau (McGee, Noronha & Tyler, 2007; McGee & Noronha, 2008), Poland (McGee & Bernal, 2006), Puerto Rico (McGee & López, 2007), Romania (McGee, 2006c; McGee, Basic & Tyler, 2008), Slovakia (McGee & Tusan, 2008), Taiwan (McGee & Andres, 2009), Thailand (McGee, 2008a), Turkey (McGee & Benk, 2011) and Ukraine (Nasadyuk, 2008). Studies were also done for various groups, including international business academics teaching in the United States (McGee, 2006b), Turkish tax practitioners (McGee, Benk, Yildirim & Kayıkçı, 2011) and Orthodox Jewish students (McGee & Cohn, 2008).

The rankings for the strength of the arguments included in these surveys followed a pattern. In general, the strongest arguments to justify tax evasion were in cases where the government engages in human rights abuses, where the tax funds wind up in the pockets of corrupt politicians, their friends or families, where the tax system is perceived as being unfair or wasteful, where there is no ability to pay, where tax rates are too high, where taxpayers do not feel they are getting their money's worth.

Some of the studies listed above examined the results by gender. In some cases, women were more opposed to tax evasion than men. In other cases, men were more opposed to tax evasion. In a third group of studies, the male-female difference was insignificant. In a few cases, age was also examined.

In cases where there were a sufficient number of older students in the sample, age was found to be a significant factor. Older people were found to be more strongly opposed to tax evasion than younger people in some cases, which confirms the findings in other studies of the relationship between age and ethical behavior (Barnett & Karson, 1987, 1989; Longenecker et al., 1989; Harris, 1990; Kelley et al., 1990; Ruegger & King, 1992; Serwinek, 1992; Wood et al., 1998).

However, not all studies that examined age in conjunction with ethical behavior found that older people were more ethical than younger people. Babakus et al. (2004) found that age is a significant factor, but what significance it has depended on the particular circumstance. Younger people from France, the UK and the USA tend to be less ethical consumers than do older people, whereas younger Austrians tend to be more ethical than older Austrians. Age was not significant for Hong Kong consumers, except in the case of stealing towels and blankets from aircraft. Younger people tended to be more opposed to this kind of activity than older Hong Kong consumers.

Browning and Zabriskie (1983) found that younger purchasing managers were more ethical than older purchasing managers when the ethical issue revolved around accepting gifts or entertainment. Other studies found no correlation between age and ethical behavior (Callan, 1992; Kidwell et al., 1987; Kohut and Corriher, 1984).

Regarding prior gender studies, some studies found that women were more ethical than men (Betz, et al., 1989; Boyd, 1981; Chonko & Hunt, 1985; Dawson, 1997; Smith & Oakley, 1997), while other studies found that men were more ethical than women (Barnett & Karson, 1987; Weeks et al., 1999). A third group of studies found no significant difference between the ethical views of men and women (Friedman et al., 1987; Hegarty & Sims, 1978; Roxas & Stoneback, 2004; Sikula & Costa, 1994).

A few studies on the ethics of tax evasion have used the *World Values* survey data – Asia (Torgler, 2004), Austria (Torgler & Schneider, 2005), India (Torgler, 2006), six Latin American countries (McGee & Gelman, 2009; Torgler, 2005), Russia (Alm, Martinez-Vazquez & Torgler, 2005, 2006), Spain (Martinez-Vazquez & Torgler, 2009), transition countries (Torgler, 2003b), Vietnam (McGee, 2008b), a comparative study of Moldova and Romania (McGee, 2009), a comparative study of Thailand and Vietnam (McGee, 2006d).

The literature of several religions has explored the question of the ethics of tax evasion. As was mentioned, Crowe (1944) reviewed 500 years of Catholic literature on the subject, and found that Catholic scholars have held all three basic positions on the ethics of tax evasion – always ethical, sometimes ethical and never ethical. Gronbacher (1998) examined Catholic social thought from the perspective of classical liberalism and concluded that only the night watchman state is worthy of support. Pennock (1998) examined the issue of conscientious war resistance and the obligation not to pay taxes to fund an unjust war. Schansberg (1998) discussed the Biblical passage about rendering unto Caesar the things that are Caesar's and speculated about what the legitimate demands of the state might be.

The Mormon literature seems to be the most opposed to tax evasion. It does not list a single instance when evasion might be justified (Smith & Kimball, 1998). A survey of Mormon students found that there was some disagreement with this absolutist position, although opposition to tax evasion was generally quite strong (McGee & Smith, 2009).

The literature of the Baha'i faith is also strongly against tax evasion. The only case where it might be justified is in cases where the government persecutes Baha'i members (DeMerville, 1998).

The Jewish literature is also strongly opposed to tax evasion, although it makes exceptions in cases where the ruler is evil or corrupt (Cohn, 1998; McGee, 1998a&f, 1999a; Tamari, 1998). In the McGee surveys mentioned above, one of the 18 questions was whether it would be unethical for a Jew living in Nazi Germany to evade taxes. Most respondents to those surveys ranked this question as among the strongest justifications to evade taxes. The survey of Orthodox Jewish students ranked it as the strongest argument to justify tax evasion (McGee &

Cohn, 2008), although even Orthodox Jewish students thought there was some obligation to pay taxes to Hitler.

Several reasons are given in the Jewish literature for paying taxes. One of them is “the law is the law,” meaning the law must always be obeyed, with no exceptions. Another reason is that a Jew must never do anything to disparage another Jew. Evading taxes makes all Jews look bad; therefore, a Jew must not evade taxes. A third argument is that Jews must perform good works (mitzvos) and they cannot do so if they are in jail, which might happen if they evade taxes.

The Muslim literature is mixed on the view toward tax evasion. Yusuf (1971) and Ahmad (1995) wrote books that discussed tax evasion in Islam. They both took the position that there is no moral duty to pay death taxes, taxes on income or taxes that cause prices to rise, such as sales and use taxes, excise taxes and tariffs. McGee’s discussions of their position (McGee, 1997, 1998d&e, 1999a) caused Jalili (2012) to write in rebuttal and present another Islamic view. Jalili states that there is an absolute duty for Muslims to pay any and all taxes duty in cases where the government is a pure Islamic state that follows the Sharia law. In cases where the state is not purely Muslim, or where it is a secular state, the obligation to pay taxes is less than absolute.

THE PRESENT STUDY

The present study examines Swiss attitudes on tax evasion. It examines more than 20 demographic variables. It is probably the most comprehensive study of tax evasion attitudes in Switzerland available in the English language. The sample size is more than 1,200, covering a wide demographic in terms of gender, age, occupation, marital status, religion, education, income level, etc.

METHODOLOGY

Groups of social scientists all over the world have been conducting coordinated surveys of the world’s population since the 1980s. Some surveys have solicited the opinions of more than 200,000 people in more than 80 countries. The surveys included hundreds of questions on a wide range of subjects. One question in the most recent surveys addressed attitudes toward tax evasion:

Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between: Cheating on taxes if you have a chance.

The range of responses used a 10-point Likert Scale where 1 = never justifiable and 10 = always justifiable. The surveys collected data on a number of demographic variables, including level of education, gender and age. The present study uses the data gathered in the most recent survey on Switzerland. The sample size was slightly more than 1,200.

More than 20 demographic variables are examined using t-tests and ANOVAs to determine whether any differences are significant at the 5 percent level. The ANOVA was used to analyze mean score differences between groups as a whole. The ANOVA scores are reported in the “b” tables. T-tests were sometimes made to compare the mean scores of two particular groups. Those scores, where made, are reported in the “a” tables.

FINDINGS

The findings are given below, classified by variable.

Gender

Table 1 reports the results for gender. Women were significantly more opposed to tax evasion than men ($p = 0.0001$). This finding confirms the findings in some other studies and runs contra to the findings in other studies.

H1: People are equally averse to tax evasion regardless of gender.

H1: Rejected.

Table 1: Ranking By Gender				
(Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Gender	Mean	Std. Dev.	n
1	Female	1.7	1.54	673
2	Male	2.3	2.02	565
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
Male v. Female		p value	0.0001	

Language Group

Switzerland is a diverse country in terms of language. The three major languages are French, German and Italian. It is an important variable in the culture, thought process and value system of a people. It is one of the main factors that determine nationhood, according to many sociologists and political scientists.

Tables 2a and 2b show the results for the language variable. German speakers were most opposed to tax evasion, followed by Italian and French speakers. An ANOVA found the difference between groups to be significant at the 1 percent level ($p < 0.0001$). The t-test

comparing the French and German groups also found a significant difference at the 1 percent level ($p = 0.0001$).

H2: People are equally averse to tax evasion regardless of the language they speak at home.

H2: Rejected.

Table 2a: Ranking By Language (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Language	Mean	Std. Dev.	n
1	German	1.9	1.57	895
2	Italian	2.0	2.11	55
3	French	2.4	2.29	288
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
French v. German		p value	0.0001	

Table 2b: Language and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	54.496	2	27.248	8.521	<0.0001
Within Groups	3,949.091	1,235	3.198		
Total	4,003.587	1,237			

Language and Gender

Table 3 shows the gender comparisons by language group. In all three cases, women were more opposed to tax evasion than men. However, the differences were significant only in the French ($p = 0.0097$) and German ($p = 0.0001$) samples.

H3: Men and women who speak the same language at home are equally averse to tax evasion.

H3: Rejected.

Table 3: Ranking By Language and Gender (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
Language and Gender	Mean	Std. Dev.	n
French			
Male	2.8	2.53	126
Female	2.1	2.03	162
German			
Male	2.2	1.81	416
Female	1.6	1.26	479
Italian			
Male	2.1	2.20	23
Female	1.9	2.07	32
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
		p value	
French: Male v. Female		0.0097	
German: Male v. Female		0.0001	

Age

Some prior studies have found that older people are more ethical than younger people, or that older people have more respect for authority and law than younger people. However, some other studies have found either that younger people are more ethical than older people or that age is not a significant factor as far as ethical behavior is concerned.

The present study examined the age demographic. The results are reported in Tables 4a and 4b. The oldest group (65+) ranked second in terms of opposition to tax evasion. The group most opposed to tax evasion was the second oldest group (55-64). The younger groups were generally less opposed to tax evasion. Thus, it could be said generally that older people are more averse to tax evasion than younger people. An ANOVA found the difference between groups to be significant at the 1 percent level ($p < 0.0001$). T-test comparisons of two individual groups also found a number of significant differences at the 1 percent and 5 percent levels.

H4: People are equally averse to tax evasion regardless of age.

H4: Rejected.

Table 4a: Ranking By Age (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Age	Mean	Std. Dev.	n
1	55-64	1.7	1.43	240
2	65+	1.9	1.76	336
3	35-44	2.1	1.72	252
3	45-54	2.1	2.03	229
5	15-24	2.5	2.09	55
5	25-34	2.5	1.96	127
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
15-24 v. 55-64		0.0008		
15-24 v. 65+		0.0232		
25-34 v. 35-44		0.0423		
25-34 v. 55-64		0.0001		
25-34 v. 65+		0.0016		
35-44 v. 55-64		0.0053		
45-54 v. 55-64		0.0136		
25-34 v. 45-54		0.0723		

Table 4b: Age and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	74.364	5	14.873	4.668	<0.0001
Within Groups	3,928.470	1,233	3.186		
Total	4,002.834	1,238			

Marital Status

Marital status was another variable tested. Tables 5a and 5b show the results. Widowed was the group most opposed to tax evasion, followed closely by married and divorced. The group least opposed to tax evasion was the single/never married category. An ANOVA found the

difference between groups to be significant at the 1 percent level ($p = 0.004$). Some t-test comparisons of individual categories also found significant differences.

H5: People are equally averse to tax evasion regardless of marital status.

H5: Rejected.

Table 5a: Ranking By Marital Status (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Marital Status	Mean	Std. Dev.	n
1	Widowed	1.8	1.76	111
2	Married	1.9	1.78	670
3	Divorced	2.0	1.74	181
4	Living together as married	2.2	1.81	35
5	Single/Never married	2.4	1.89	236
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
Married v. Single/Never married		0.0003		
Divorced v. Single/Never married		0.0272		
Widowed v. Single/Never married		0.0051		

Table 5b: Marital Status and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	50.179	4	12.545	3.894	0.004
Within Groups	3,956.195	1,228	3.222		
Total	4,006.374	1,232			

Number of Children

Number of children was another variable that was tested. One might guess a priori that the more children one had, the less opposition there would be to tax evasion, based on the theory of ability to pay. However, this tentative conclusion needed to be tested. Tables 6a and 6b show the results.

Those with 6 children were most opposed to tax evasion. However, this ranking can be discounted due to the small sample size. If one examines the overall pattern, one can fairly conclude that people with fewer children are less averse to tax evasion than people with more children. One possible explanation for this relationship could be that people with just a few children are younger than people with more children because they are not yet finished having children, and younger people are less averse to tax evasion. There might also be an income effect, although it is unclear what that effect might be. An ANOVA found the difference between groups to be insignificant at the 10 percent level ($p = 0.127$). However, a t-test between the groups with 0 and 4 children did find significance at the 5 percent level ($p = 0.0141$) and a comparison of the 0 and 3 groups found significance at the 10 percent level ($p = 0.0665$). Thus, one can conclude that the number of children may be a significant variable, although the evidence is weak in most cases. All that is needed to reject a hypothesis is to find one case where the difference is significant and one case was found.

H6: People are equally averse to tax evasion regardless of number of children.

H6: Rejected.

Table 6a: Ranking By Number Of Children (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Number of Children	Mean	Std. Dev.	n
1	6	1.3	0.49	5
2	4	1.6	1.45	59
2	5	1.6	1.49	24
4	3	1.9	1.82	177
5	1	2.0	1.81	161
5	2	2.0	1.87	429
7	None	2.2	1.78	380
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
0 v. 4		0.0141		
0 v. 3		0.0665		

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	32.322	6	5.387	1.663	0.127
Within Groups	3,978.623	1,228	3.240		
Total	4,010.945	1,234			

Religion

Religion is often a significant variable in sociological and political science research. Thus, we decided that a test of this variable would be worthwhile. The results are presented in Tables 7a and 7b. The religion that was most opposed to tax evasion was Other, which could mean several things, including other, atheist or agnostic. Jews were ranked second, although this result is unreliable because of the small sample size. Protestants, Roman Catholics and Muslims were ranked further down the list. The Muslim ranking might also be discounted, given the small sample size.

An ANOVA found the difference between groups to be insignificant ($p = 0.231$) and t -test comparisons between particular religions did not find any significant differences at the 5 percent level, although a significance level of 10 percent was found for the comparison of Other and Roman Catholic ($p = 0.0760$).

H7: People are equally averse to tax evasion regardless of religion.

H7: Cannot be rejected.

Rank	Religion	Mean	Std. Dev.	n
1	Other	1.5	1.45	46
2	Jew	1.6	1.29	7
3	Protestant	1.9	1.75	467
4	Roman Catholic	2.0	1.85	454
5	Muslim	2.5	2.28	19
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
Other v. Roman Catholic		p value	0.0760	

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	18.043	4	4.511	1.403	0.231
Within Groups	3,175.686	988	3.214		
Total	3,193.729	992			

Religious Practice

This question asked how often do you attend religious services? It is a way to measure values based on actions rather than mere membership in a particular religion. One might conclude a priori that the more frequently one attends religious services, the more opposed one might be to tax evasion, since frequent attendance shows a certain deference to authority.

The results are shown in Tables 8a and 8b. The ranking is basically linear. Those who attend religious services more frequently are more opposed to tax evasion than are those who attend less frequently. An ANOVA found the difference between groups to be significant at the 1 percent level ($p < 0.0001$). Many of the t-test comparisons of individual categories also found a high level of significance.

H8: People are equally averse to tax evasion regardless of religious practice.

H8: Rejected.

Rank	Religious Practice	Mean	Std. Dev.	n
1	More than once a week	1.1	0.38	31
2	Once a week	1.6	1.50	119
3	Once a month	1.8	1.53	151
4	Less than once a year	1.9	1.69	148
5	Only on special holy days	2.1	1.94	268
5	Once a year	2.1	1.75	118
7	Never/practically never	2.3	1.97	394

Table 8a: Ranking By Religious Practice (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
	p value		
More than once a week v. Once a month	0.0124		
More than once a week v. Only on special holy days	0.0045		
More than once a week v. Once a year	0.0019		
More than once a week v. Less than once a year	0.0097		
More than once a week v. Never/practically never	0.0008		
Once a week v. Only on special holy days	0.0129		
Once a week v. E Once a year	0.0190		
Once a week v. Never/practically never	0.0004		
Once a month v. Never/practically never	0.0051		
Less than once a year v. Never/practically never	0.0292		
A More than once a week v. B Once a week	0.0683		

Table 8b: Religious Practice and Attitudes toward Tax Evasion					
ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	89.918	6	14.986	4.661	<0.0001
Within Groups	3,929.201	1,222	3.215		
Total	4,019.119	1,228			

Importance of God in Your Life

The question asked “How important is God in your life?” One might conclude a priori that as the importance of God in one’s life increases, so does aversion to tax evasion. However, such a conclusion can only be tentative until it is tested.

The results are shown in Tables 9a and 9b. Although the relationship is not strictly linear, there is a definite relationship between the importance of God in one’s life and view on tax evasion. The more important God is, the stronger is the opposition to tax evasion, which is the same conclusion reached a priori. An ANOVA found the difference between groups to be significant at the 1 percent level ($p < 0.0001$). Some of the t-test comparisons also found a high level of significance.

H9: People are equally averse to tax evasion regardless of the importance of God in their life.
 H9: Rejected.

Table 9a: Ranking By Importance of God in Your Life (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Importance of God in Your Life	Mean	Std. Dev.	n
1	10 Very important	1.6	1.43	291
2	9	1.7	1.49	86
3	5	1.8	1.64	115
4	8	2.0	1.87	180
5	6	2.1	1.60	83
6	1 Not at all important	2.2	2.02	139
6	2	2.2	1.86	83
6	3	2.2	1.85	63
9	7	2.4	2.01	135
10	4	2.8	2.65	46
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
1 v. 10 Very important		0.0004		
2 v. 9		0.0550		

Table 9b: Importance of God in Your Life and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	87.132	7	12.447	4.149	<0.0001
Within Groups	3,312.365	1,104	3.000		
Total	3,399.497	1,111			

Education Level

It was thought that education level might make a difference in opinion regarding the acceptability of tax evasion but it was unclear what the relationship might be. Perhaps people with a higher level of education would be more averse to tax evasion because of their stronger

respect for authority and the rule or law or perhaps people at the higher education levels, which are also often in the higher income categories, would feel exploited by the graduated income tax that extracts more from them than it returns in benefits. Thus, the relationship between level of education and attitude toward tax evasion needed to be tested.

The results are presented in Tables 10a and 10b. Those with less education tended to be more averse to tax evasion, while those who had more education tended to be less averse to tax evasion. Perhaps that is because people with a higher level of education are aware of more ways to cheat on taxes. However, an ANOVA found the difference between groups not to be significant ($p = 1.0000$) and t-test comparisons between individual groups also failed to find any significant differences.

H10: People are equally averse to tax evasion regardless of education level.

H10: Cannot be rejected.

Table 10a: Ranking By Education Level (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Education Level	Mean	Std. Dev.	n
1	No formal education	1.5	1.73	2
2	Incomplete secondary – technical, vocational	1.6	1.34	23
3	Completed elementary	1.8	1.81	99
4	Complete secondary – technical, vocational	2.0	1.93	515
4	University with degree	2.0	1.61	410
6	Complete secondary – college preparatory	2.1	1.84	182
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
None significant		p value		

Table 10b: Education Level and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	9.847	5	1.969	0.000	1.000
Within Groups	6,131,274.321	1,225	5,005.122		
Total	6,131,284.168	1,230			

Employment Status

It was thought that employment status might make a difference in attitude toward tax evasion, although it was unclear what the relationship might be. Thus, there was a need to test this variable.

The results are presented in Tables 11a and 11b. Housewives were most opposed to tax evasion, followed by part-time and retired workers, students, the self-employed, full-time and unemployed individuals. What was somewhat surprising was the relative ranking of self-employed individuals. One would think that this group would be less opposed to tax evasion than other groups because they have to turn over the taxes to the government themselves. Taxes are not automatically calculated and withheld from paychecks by someone in the bookkeeping department. However, the difference in mean scores between the self-employed group and the two groups that had higher mean scores was not significant. An ANOVA found that the difference between groups was significant at the 1 percent level ($p < 0.0001$). Some t-test comparisons of individual categories also found a high level of significance.

H11: People are equally averse to tax evasion regardless of employment status.

H11: Rejected.

Table 11a: Ranking By Employment Status				
(Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Employment Status	Mean	Std. Dev.	n
1	Housewife	1.3	0.82	66
2	Part time	1.8	1.60	208
2	Retired	1.8	1.69	348
4	Students	2.1	1.43	37
5	Self employed	2.2	1.86	85
6	Full time	2.3	2.04	473
6	Unemployed	2.3	1.68	12
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
Full time v. Part time		0.0018		
Full time v. Retired		0.0002		
Full time v. Housewife		0.0001		
Part time v. Self employed		0.0653		
Part time v. Housewife		0.0154		
Self employed v. Retired		0.0559		
Self employed v. Housewife		0.0003		
Retired v. Housewife		0.0192		
Housewife v. Students		0.0005		

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	101.937	6	16.989	5.290	<0.0001
Within Groups	3,924.237	1,222	3.211		
Total	4,026.174	1,228			

Institution of Occupation

It was thought that institution of occupation might be a significant variable, although it was not clear what the relationship might be between type of employer and attitude toward tax evasion. On the one hand, one might presume that people who work in the private, wealth creating sector, would be more averse to tax evasion than people who work for government, and who are on the receiving end of the tax revenues. However, one might instead assume that government workers, who can see how the government functions from the inside, might be more cynical, and thus might have less opposition to tax evasion.

Tables 12a and 12b show the data. People employed in public institutions (government) were somewhat more opposed to tax evasion than people who worked for private non-profit organizations and private sector business employees. An ANOVA found the difference between groups to be significant at the 5 percent level ($p = 0.038$). A t-test comparison of the public institution and private business categories also found the significance level to be 5 percent ($p = 0.0115$).

H12: People are equally averse to tax evasion regardless of institution of occupation.

H12: Rejected.

Rank	Institution of Occupation	Mean	Std. Dev.	n
1	Public Institution	1.8	1.47	328
2	Private Non-profit Organization	1.9	1.82	43
3	Private Business	2.1	1.93	808
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
Public Institution v. Private Business		p value	0.0115	

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	21.529	2	10.765	3.287	0.038
Within Groups	3,851.729	1,176	3.275		
Total	3,873.259	1,178			

Income Level

One might tentatively conclude a priori that people at the higher end of the income scale would be less averse to tax evasion than people at the lower end, since they might feel exploited by a graduated tax system that takes more from them than it returns in benefits. However, such a tentative conclusion needs to be tested.

Tables 13a and 13b show the results. There seems to be no clear, linear pattern. Those in the second highest income category are most opposed to tax evasion, while those in the next to the lowest income category are almost equally opposed to tax evasion. The group least opposed to tax evasion is the groups in the lowest income category. People in the middle income categories (3-5-6-7-8) are between the two extremes. Thus, all that can be said is that income level makes a difference, but what difference it makes is unclear. The fact that the sample sizes for the highest and lowest ranked groups were small further discounts the strength of any tentative conclusion.

An ANOVA found the difference between groups not to be significant ($p = 0.653$), although a t-test comparison of groups 4 and 5 found a difference in mean score at the 10 percent level ($p = 0.0911$).

H13: People are equally averse to tax evasion regardless of income level.

H13: Cannot be rejected.

Rank	Income Level	Mean	Std. Dev.	n
1	Ninth step	1.6	1.60	18
2	Second step	1.7	1.27	38
3	Fourth step	1.8	1.64	149
4	Tenth step	1.9	1.29	14

Table 13a: Ranking By Income Level (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Income Level	Mean	Std. Dev.	n
5	Third step	2.0	2.09	92
6	Fifth step	2.1	1.77	260
6	Sixth step	2.1	1.77	210
6	Seventh step	2.1	1.92	208
6	Eighth step	2.1	1.72	103
10	Lower step	2.5	2.38	23
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
4 v. 5		p value	0.0911	

Table 13b: Income Level and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	16.157	7	2.308	0.722	0.653
Within Groups	3,407.907	1,066	3.197		
Total	3,424.064	1,073			

Social Class

The World Values surveys also gathered data on social class. It is difficult to predict a priori what the relationship might be between social class and attitude toward tax evasion.

Tables 14a and 14b show the relative rankings. There seems to be no clear relationship. The lower class was most strongly opposed to tax evasion, but the upper class was almost equally opposed. The upper middle class was least opposed to tax evasion. An ANOVA found that the difference between groups was not significant ($p = 0.475$) and none of the t-test comparisons found any significant differences, either.

H14: People are equally averse to tax evasion regardless of social class.

H14: Cannot be rejected.

Table 14a: Ranking By Social Class (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Social Class	Mean	Std. Dev.	n
1	Lower class	1.6	1.01	12
2	Upper class	1.7	1.40	40
3	Working class	1.9	1.81	126
4	Lower middle class	2.0	1.85	469
5	Upper middle class	2.1	1.84	542
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
None Significant		p value		

Table 14b: Social Class and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	P value
Between Groups	11.683	4	2.921	0.880	0.475
Within Groups	3,930.513	1,184	3.320		
Total	3,942.196	1,188			

Region

It was thought that region might make a difference, although what difference it might make was unclear. The results are reported in Tables 15a and 15b. The German region was most strongly opposed to tax evasion; the French part of the country was least opposed. This finding corresponds closely with the test of language made above. An ANOVA of difference between groups found the difference to be significant at the 1 percent level ($p < 0.0001$). A t-test found the differences in French and German mean scores to also be significant at the 1 percent level ($p = 0.0001$).

H15: People are equally averse to tax evasion regardless of region.

H15: Rejected.

Table 15a: Ranking By Region (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Region	Mean	Std. Dev.	n
1	Swiss German	1.9	1.57	885
2	Swiss Italian	2.0	2.11	58
3	Swiss French	2.4	2.27	294
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
Swiss German v. Swiss French		p value	0.0001	

Table 15b: Region and Attitudes toward Tax Evasion					
ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	55.205	2	27.603	8.640	<0.0001
Within Groups	3,942.541	1,234	3.195		
Total	3,997.746	1,236			

Feeling of Happiness

The *World Values* surveys also collected data based on happiness. A priori, one might assume that tax evaders are less happy than nonevaders because they have to constantly look over their heads for the tax police. Alternatively, one might tentatively conclude that evaders are happier than the general population because they get to keep a larger portion of the fruits of their labor. A test of this variable is needed to resolve these two diametrically opposed theories.

Tables 16a and 16b show the results. Those most opposed to tax evasion are the happiest people and those least opposed to tax evasion are the least happy groups. An ANOVA found the difference between groups to be significant only at the 10 percent level ($p = 0.061$). A t-test comparing the mean scores of the very happy and not very happy groups found significance at the 5 percent level ($p = 0.0324$). Thus, the state of happiness does make a difference in at least one case.

H16: People are equally averse to tax evasion regardless of level of happiness.

H16: Rejected.

Table 16a: Ranking By Feeling of Happiness				
(Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Feeling of Happiness	Mean	Std. Dev.	n
1	Very happy	1.9	1.81	521
2	Quite happy	2.0	1.76	637
3	Not very happy	2.4	1.99	70
4	Not happy at all	3.4	3.26	4
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
Very happy v. Not very happy		p value	0.0324	

Table 16b: Feeling of Happiness and Attitudes toward Tax Evasion					
ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	23.972	3	7.991	2.466	0.061
Within Groups	3,978.775	1,228	3.240		
Total	4,002.747	1,231			

Satisfaction with Life

It was thought that satisfaction with life might be a significant variable, so it was tested. One might presume that the results for this variable would be similar to the results for the happiness variable, but such an assumption must be tentative until it can be tested against the data.

Tables 17a and 17b show the results. There seems to be no clear pattern. An ANOVA of difference between groups found that the difference is significant at the 1 percent level ($p < 0.0001$), but that is all that can be said on the matter. Several t-test comparisons also found some of the differences in individual mean scores to be significant.

H17: People are equally averse to tax evasion regardless of their degree of satisfaction with life.

H17: Rejected.

Table 17a: Ranking By Satisfaction With Life				
(Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Satisfaction with Life	Mean	Std. Dev.	n
1	9	1.6	1.53	212
2	3	1.7	1.41	15
3	7	2.0	1.70	451
4	8	2.0	1.86	246
5	2	2.2	1.75	12
6	4	2.3	2.12	56
6	5	2.3	1.97	68
8	6	2.5	1.98	162
9	1 Dissatisfied	3.7	3.53	6

Table 17a: Ranking By Satisfaction With Life (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
SIGNIFICANT DIFFERENCES IN MEAN SCORES			
	p value		
4 v. 9	0.0056		
5 v. 9	0.0025		
6 v. 9	0.0001		
6 v. 8	0.0100		
6 v. 7	0.0022		

Table 17b: Satisfaction with Life and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	86.608	7	12.373	3.910	<0.0001
Within Groups	3,841.950	1,214	3.165		
Total	3,928.558	1,221			

State of Health

State of health was another variable in the *World Values* surveys. It was unclear what the relationship might be between state of health and attitude toward tax evasion, so it was perceived that a test was needed to resolve this question.

Tables 18a and 18b show the data. There was a linear relationship between health and attitude toward tax evasion. Those in the best health were most opposed to tax evasion, while those in the poorest health were least opposed. However, an ANOVA found the difference between groups not to be significant ($p = 0.747$) and t-tests of individual groups did not find any significance either.

H18: People are equally averse to tax evasion regardless of health status.

H18: Cannot be rejected.

Table 18a: Ranking By State Of Health (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	State of Health	Mean	Std. Dev.	n
1	Very good	2.0	1.80	411
2	Good	2.0	1.72	632
3	Fair	2.1	2.04	163
4	Poor	2.3	2.03	32
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
None Significant		p value		

Table 18b: State of Health and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	3.968	3	1.323	0.408	0.747
Within Groups	3,997.078	1,234	3.239		
Total	4,001.046	1,237			

Self Positioning in Political Scale

Data was available for positioning on the political scale. One might think that those on the left would be more opposed to tax evasion than those on the right, since those on the left want to collect more tax funds for their various projects. However, this tentative conclusion needs to be tested.

Tables 19a and 19b show the results. Although the far left group (1) was most opposed to tax evasion, and the second most leftist group (2) ranked third, the general ranking was not in a clearly lineal pattern. The group on the extreme right (10) ranked fifth and the next farthest right group (9) ranked tenth. An ANOVA found the difference between groups to be significant at the 5 percent level ($p = 0.027$). Thus, we can say that position on the political scale makes a difference, but what that difference might be remains unclear. More research is needed.

H19: People are equally averse to tax evasion regardless of position on the political scale.

H19: Rejected.

Table 19a: Ranking By Self Positioning In Political Scale (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Self Positioning in Political Scale	Mean	Std. Dev.	n
1	1 Left	1.8	1.79	31
1	5	1.8	1.57	289
3	2	1.9	1.75	49
3	6	1.9	1.69	152
5	4	2.0	1.68	149
5	10 Right	2.0	2.15	24
7	3	2.1	1.75	151
8	8	2.3	2.12	113
9	7	2.4	2.01	147
10	9	3.1	2.47	21
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
L v. 9		0.0323		
2 v. 9		0.0237		
3 v. 9		0.0214		
4 v. 7		0.0641		
4 v. 9		0.0093		
6 v. 8		0.0888		
6 v. 9		0.0047		

Table 19b: Self Positioning in Political Scale and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	49.490	7	7.070	2.261	0.027
Within Groups	3,354.603	1,073	3.126		
Total	3,404.093	1,080			

Hard Work Brings Success

Data was available on view toward the relationship of hard work to success. One might guess a priori that those who are strongest in their belief that hard work brings success would also be most opposed to tax evasion, since they probably hold strong beliefs in the rule of law and respect for the system and for authority. However, such a conclusion must remain tentative until it can be tested against the data.

The results are reported in Tables 20a and 20b. There seems to be a general pattern where those who most firmly believe in the work ethic also are strongest in their opposition to tax evasion. An ANOVA of differences between groups found significance at the 5 percent level ($p = 0.048$). Some t-test comparisons also found differences between individual groups that were significant at the 1 percent and 5 percent levels.

H20: People are equally averse to tax evasion regardless of attitude toward hard work.

H20: Rejected.

Table 20a: Ranking By Hard Work Brings Success (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Hard Work Brings Success	Mean	Std. Dev.	n
1	1 In the long run, hard work usually brings a better life	1.7	1.67	95
1	6	1.7	1.36	96
3	2	1.9	1.74	136
3	4	1.9	1.48	126
3	5	1.9	1.60	177
6	7	2.1	1.73	123
6	8	2.1	1.86	156
8	3	2.2	1.78	161
9	9	2.3	2.27	63
10	10 Hard work doesn't generally bring success – it's more a matter of luck and connections.	2.5	2.61	96
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
1 v. 10		0.0126		
1 v. 9		0.0577		
1 v. 8		0.0873		

Table 20a: Ranking By Hard Work Brings Success (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
1 v. 3	0.0272		
2 v. 10	0.0368		
3 v. 5	0.0185		
4 v. 10	0.0315		
5 v. 10	0.0194		
6 v. 10	0.0084		
6 v. 9	0.0388		
7 v. 10	0.0642		

Table 20b: Hard Work Brings Success and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	45.090	7	6.441	2.035	0.048
Within Groups	3,364.263	1,063	3.165		
Total	3,409.353	1,070			

Income Equality

The *World Values* surveys asked whether incomes should be more equal or whether we need larger income differences as incentives. One might predict a priori that those who favored more equal incomes would be more opposed to tax evasion, since they would favor using the tax system to reduce income disparities. However, such a conclusion must be tentative until one examines the data.

Tables 21a and 21b show the results. There seems to be no clear pattern. Those in the middle (group 5) and those in group 10 (we need larger income differences as incentives) tied in the rankings and were the most strongly opposed to tax evasion. Those from group 1, who most strongly believed that incomes should be made more equal, had almost the same mean score as groups 5 and 10. An ANOVA found that the difference between groups was not significant ($p = 0.347$) and none of the t-test comparing individual groups found and significant differences at the 5 percent level, either, although two differences were found at the 10 percent level. Thus, it appears that view toward equality of income is not a significant variable when it comes to attitude toward tax evasion.

H21: People are equally averse to tax evasion regardless of attitude toward income equality.

H21: Cannot be rejected.

Table 21a: Ranking By Income Equality (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Income Equality	Mean	Std. Dev.	n
1	5	1.8	1.50	134
1	10 We need larger income differences as incentives	1.8	1.98	22
3	1 Incomes should be made more equal	1.9	1.98	272
4	2	2.0	1.83	178
4	8	2.0	1.58	55
6	3	2.1	1.75	262
6	4	2.1	1.64	148
6	6	2.1	1.63	67
9	9	2.2	2.19	16
10	7	2.4	2.13	74
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
1 v. 7		0.0590		
3 v. 5		0.0915		

Table 21b: Income Equality and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	24.234	7	3.462	1.080	0.347
Within Groups	3,790.472	1,182	3.207		
Total	3,814.706	1,189			

Private vs. State Ownership of Business

The *World Values* surveys also asked opinions on whether government ownership or private ownership of business should be increased. It was unclear a priori what the relation might be between this view and attitude toward tax evasion, so the relationship was tested.

Tables 22a and 22b show the results. The most interesting finding was that the groups at the two extremes had nearly identical mean scores and they were the groups ranked to oppose tax evasion the least. The three groups having the most opposition to tax evasion (9-8-6) were all leaning toward the view that government ownership on business should increase. However, an ANOVA of difference between groups found the difference not be to significant ($p = 0.453$). T-tests comparing individual groups did not find any significant differences either, although two differences were found to be significant at the 10 percent level.

H22: People are equally averse to tax evasion regardless of attitude toward ownership of business.

H22: Cannot be rejected.

Table 22a: Ranking By Private v. State Ownership of Business (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Private v. State Ownership of Business	Mean	Std. Dev.	n
1	9	1.6	1.55	20
2	8	1.7	1.71	61
3	6	1.8	1.35	93
4	2	2.0	1.60	97
4	4	2.0	1.61	142
4	5	2.0	1.79	388
7	3	2.1	1.83	168
8	7	2.2	1.78	71
8	10 Government ownership of business should be increased	2.2	2.55	35
10	1 Private ownership of business should be increased	2.3	2.20	83
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
1 v. 8		0.0785		
1 v. 6		0.0677		

Table 22b: Private v. State Ownership of Business and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	P value
Between Groups	20.873	7	2.982	0.968	0.453
Within Groups	3,372.283	1,095	3.080		
Total	3,393.156	1,102			

Government Responsibility

Tables 23a and 23b show the results for the question on government responsibility. One might presume a priori that those who believe strongly that people should take individual responsibility would be more opposed to tax evasion than people who believe the government should take more responsibility, but such a conclusion must remain tentative until it can be tested.

Table 23a shows that the group most strongly in favor of the position that people should take more responsibility is also the group that is most strongly opposed to tax evasion. However, those at the opposite end of the spectrum (group 1) ranked fourth and had a mean score that was not far different from group 10. Interestingly, the two groups at each end of the spectrum (1&2 and 9&10) all ranked in the top four, and there seemed to be no clear pattern for the remainder of the rankings. An ANOVA between groups found the difference to be significant ($p = 0.010$) and some t-tests found some of the individual differences to be significant as well.

H23: People are equally averse to tax evasion regardless of attitude toward personal responsibility.

H23: Rejected.

Table 23a: Ranking By Government Responsibility (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Government Responsibility	Mean	Std. Dev.	n
1	10 People should take more responsibility	1.7	1.64	123
2	2	1.8	1.79	58
2	9	1.8	1.48	103
4	1 The government should take more responsibility	1.9	2.07	58
5	5	2.0	1.63	175
5	8	2.0	1.79	253
7	6	2.1	1.82	125
7	7	2.1	1.69	158
9	3	2.2	1.92	100
10	4	2.7	2.46	79
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
1 v. 4		0.0466		
2 v. 4		0.0195		

Table 23a: Ranking By Government Responsibility (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)			
3 v. 10	0.0371		
3 v. 9	0.0974		
4 v. 10	0.0006		
4 v. 9	0.0025		
4 v. 8	0.0061		
4 v. 7	0.0288		
4 v. 6	0.0472		
4 v. 5	0.0078		
6 v. 10	0.0704		
7 v. 10	0.0471		

Table 23b: Government Responsibility and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	58.826	7	8.404	2.647	0.010
Within Groups	3,517.410	1,108	3.175		
Total	3,576.235	1,115			

Confidence in Government

One might presume that those who had a high degree of confidence in government to be more firmly opposed to tax evasion than people who had little or no trust in government. We decided to test this proposition. The results are shown in Tables 24a and 24b.

The a priori view turned out to be accurate. Those who had a great deal or quite a lot of confidence in government were more strongly opposed to tax evasion than were those who had little or no trust in government. An ANOVA found that the difference between groups was significant at the 1 percent level ($p = 0.005$). Some t-test comparisons also found differences to be significant at the 1 percent level.

H24: People are equally averse to tax evasion regardless of the degree of confidence in government.

H24: Rejected.

Table 24a: Ranking By Confidence in Government (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Confidence in Government	Mean	Std. Dev.	n
1	A great deal	1.9	1.73	92
2	Quite a lot	2.0	1.71	715
2	Not very much	2.0	1.81	342
4	Not at all	2.9	2.73	52
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
A great deal v. Not at all		0.0080		
Quite a lot v. Not at all		0.0005		
Not very much v. Not at all		0.0021		

Table 24b: Confidence in Government and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	41.863	3	13.954	4.330	0.005
Within Groups	3,857.409	1,197	3.223		
Total	3,899.272	1,200			

Confidence in the Justice System

One might expect that the relationship between confidence in the justice system and attitude toward tax evasion might be the same as the relationship for confidence in government. This assumption was shown to be correct.

Tables 25a and 25b show the results. Those who have a great deal of confidence in the justice system are more firmly opposed to tax evasion than those who have little or no confidence in the justice system. However, an ANOVA found the difference between groups not

to be significant at the 5 percent level, although some t-test found differences that were significant at the 5 percent level.

H25: People are equally averse to tax evasion regardless of the degree of confidence in the justice system.

H25: Rejected.

Table 25a: Ranking By Confidence In The Justice System (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Confidence in the Justice System	Mean	Std. Dev.	n
1	A great deal	1.8	1.42	183
2	Quite a lot	2.1	1.81	744
3	Not very much	2.0	2.02	231
4	Not at all	2.3	1.99	48
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
A great deal v. Quite a lot		0.0370		
A great deal v. Not at all		0.0485		

Table 25b: Confidence in the Justice System and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	16.821	3	5.607	1.717	0.162
Within Groups	3,925.744	1,202	3.266		
Total	3,942.564	1,205			

Confidence in the Police

The *World Values* surveys also asked about confidence in the police. The results are shown in Tables 26a and 26b. Again, those who had the most confidence were also the most strongly opposed to tax evasion. An ANOVA found that the difference was significant at 5 percent ($p = 0.038$). One t-test comparison also found significance at the 5 percent level and two other t-test comparisons found significance at the 10 percent level.

H26: People are equally averse to tax evasion regardless of the degree of confidence in the police.

H26: Rejected.

Table 26a: Ranking By Confidence in the Police (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Confidence in the Police	Mean	Std. Dev.	n
1	A great deal	1.9	1.86	191
2	Quite a lot	2.0	1.71	831
3	Not very much	2.3	2.07	179
4	Not at all	2.7	2.38	24
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
A great deal v. Not very much		0.0511		
A great deal v. Not at all		0.0561		
Quite a lot v. Not very much		0.0410		

Table 26b: Confidence in the Police and Attitudes toward Tax Evasion ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	27.623	3	9.208	2.827	0.038
Within Groups	3,977.320	1,221	3.257		
Total	4,004.944	1,224			

Relative Seriousness of Tax Evasion

The *World Values* survey included questions on several other acts that have ethical content. In order to determine the relative seriousness of tax evasion, we decided to rank the various ethical questions by mean score.

The results are presented in Tables 27a and 27b. There was a three-way tie for first place among claiming benefits to which you are not entitled, accepting a bribe and wife beating. Avoiding a fare on public transport was also found to be more serious than tax evasion. Suicide, prostitution, abortion, euthanasia, divorce and homosexuality were deemed to be less serious

offenses than tax evasion. An ANOVA found the difference between groups to be significant at the 1 percent level ($p < 0.0001$). T-test comparisons were also done of the tax evasion mean score and the mean scores of the other categories. Differences were found to be significant at the 1 percent level.

H27: Tax evasion is equally as serious as other acts.

H27: Rejected.

Table 27a: Ranking By Relative Seriousness of Tax Evasion (Cheating on taxes is: 1 = never justifiable; 10 = always justifiable)				
Rank	Seriousness of Tax Evasion	Mean	Std. Dev.	n
1	Claiming government benefits to which you are not entitled.	1.5	1.31	1236
1	Someone accepting a bribe in the course of their duties.	1.5	1.23	1238
1	Wife beating	1.5	1.29	1235
4	Avoiding a fare on public transport.	1.8	1.48	1240
5	Cheating on taxes if you have a chance.	2.0	1.80	1238
6	Suicide	4.6	3.07	1176
7	Prostitution	5.1	2.94	1196
8	Abortion	5.5	2.94	1197
9	Euthanasia	6.6	3.10	1203
10	Divorce	6.9	2.66	1213
11	Homosexuality	7.3	3.13	1179
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
				p value
Cheating on taxes if you have a chance v. Claiming government benefits to which you are not entitled				0.0001
Cheating on taxes if you have a chance v. Avoiding a fare on public transport.				0.0025
Cheating on taxes if you have a chance v. Someone accepting a bribe in the course of their duties.				0.0001
Cheating on taxes if you have a chance v. Homosexuality				0.0001
Cheating on taxes if you have a chance v. Prostitution				0.0001
Cheating on taxes if you have a chance v. Abortion				0.0001
Cheating on taxes if you have a chance v. Divorce				0.0001
Cheating on taxes if you have a chance v. Euthanasia				0.0001
Cheating on taxes if you have a chance v. Wife beating				0.0001

	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	51,444.643	7	7,349.235	1,664.643	<0.0001
Within Groups	43,230.719	9,792	4.415		
Total	94,675.361	9,799			

Trend Analysis

Switzerland was included in three of the five *World Values* surveys, so it was possible to compare the mean score for the most recent survey with those of prior surveys to determine if there was any trend in attitudes toward tax evasion. Tables 28a and 28b show the results. The attitude toward tax evasion became less averse between 1989 and 1996, then became more averse in 2007. The ANOVA between groups found the difference to be significant at the 1 percent level ($p < 0.0001$).

H28: People are just as averse to tax evasion now as they have been in the past.

H28: Rejected.

Rank	Trend Analysis	Mean	Std. Dev.	n
1	Wave 5 - 2007	2.0	1.80	1238
2	Wave 2 - 1989	2.3	2.24	1356
3	Wave 3 - 1996	2.6	2.44	1187
SIGNIFICANT DIFFERENCES IN MEAN SCORES				
		p value		
	Wave 2 - 1989 v. Wave 3 - 1996	0.0012		
	Wave 2 - 1989 v. Wave 5	0.0002		
	Wave 3 - 1996 v. Wave 5	0.0001		

Table 28b: Trend Analysis and Attitudes toward Tax Evasion					
ANOVA Analysis					
	Σ Squares	Df	Mean Squares	Fisher F-value	p value
Between Groups	218.188	2	109.094	23.067	<0.0001
Within Groups	17,867.698	3,778	4.729		
Total	18,085.886	3,780			

CONCLUDING COMMENTS

This study found several interesting relationships between attitude toward tax evasion and more than 20 demographic variables. It is perhaps the most comprehensive demographic study of Swiss attitudes toward tax evasion done to date. The methodology used in this study can also serve as a template for studies of other countries and regions. Some of the demographic variables included in this study have not been used in prior studies, which break new ground and may serve as the basis for further research into these variables.

REFERENCES

- Adams, C. (1982). *Fight, Flight and Fraud: The Story of Taxation*. Curacao: Euro-Dutch Publishers.
- Adams, C. (1993). *For Good or Evil: The Impact of Taxes on the Course of Civilization*. London, New York & Lanham: Madison Books.
- Ahmad, M. (1995). *Business Ethics in Islam*. Islamabad, Pakistan: The International Institute of Islamic Thought & The International Institute of Islamic Economics.
- Alm, J., J. Martinez-Vazquez & B. Torgler. (2005). Russian Tax Morale in the 1990s. *Proceedings of the 98th Annual Conference on Taxation of the National Tax Association*, 287-292.
- Alm, J., J. Martinez-Vazquez & B. Torgler. (2006). Russian attitudes toward paying taxes – before, during and after the transition. *International Journal of Social Economics*, 33(12), 832-857.
- Babakus, E., T. B. Cornwell, V. Mitchell & B. Schlegelmilch (2004). Reactions to Unethical Consumer Behavior across Six Countries. *The Journal of Consumer Marketing*, 21(4/5), 254-263.
- Barnett, J. H. & M. J. Karson. (1987). Personal Values and Business Decisions: An Exploratory Investigation. *Journal of Business Ethics*, 6(5), 371-382.

- Barnett, J. H. & M. J. Karson. (1989). Managers, Values, and Executive Decisions: An Exploration of the Role of Gender, Career Stage, Organizational Level, Function, and the Importance of Ethics, Relationships and Results in Managerial Decision-Making. *Journal of Business Ethics*, 8(10), 747-771.
- Betz, M., L. O'Connell & J. M. Shepard. (1989). Gender Differences in Proclivity for Unethical Behavior. *Journal of Business Ethics*, 8(5), 321-324.
- Block, W. (1989). The Justification of Taxation in the Public Finance Literature: A Critique. *Journal of Public Finance and Public Choice*, 3, 141-158.
- Block, W. (1993). Public Finance Texts Cannot Justify Government Taxation: A Critique. *Canadian Public Administration/Administration Publique du Canada*, 36(2), 225-262, reprinted in revised form under the title "The Justification for Taxation in the Economics Literature" in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 36-88) The Dumont Institute for Public Policy Research, Dumont, NJ, 1998.
- Bloomquist, K.M. (2003a). Tax Evasion, Income Inequality and Opportunity Costs of Compliance. Presented at the 96th Annual Conference of the National Tax Association, Drake Hotel, Chicago (November). www.irs.gov/pub/irs-soi/bloomq.pdf
- Bloomquist, K.M. (2003b). Trends as Changes in Variance: The Case of Tax Noncompliance. 2003 IRS Research Conference (June).
- Blum, W. J. & H. Kalven, Jr. (1953). *The Uneasy Case for Progressive Taxation*. Chicago & London: University of Chicago Press.
- Boyd, D. P. (1981). Improving Ethical Awareness Through the Business and Society Course. *Business and Society*, 20, 21, 2, 1, 27-31.
- Browning, J. & N. B. Zabriskie. (1983). How Ethical Are Industrial Buyers? *Industrial Marketing Management*, 12(4), 219-224.
- Buchanan, J.M. (1967). *Public Finance in Democratic Process*. Chapel Hill, NC: University of North Carolina Press.
- Buchanan, J.M. & M.R. Flowers. (1975). *The Public Finances*, 4th edition. Homewood, IL: Richard D. Irwin, Inc.
- Buchanan, J.M. & R.A. Musgrave. (2001). *Public Finance and Public Choice: Two Contrasting Visions of the State*. Cambridge, MA & London. MIT Press.
- Callan, Victor J. (1992). Predicting Ethical Values and Training Needs in Ethics. *Journal of Business Ethics*, 11(10), 761-769.
- Chonko, L. B. & S. D. Hunt. (1985). Ethics and Marketing Management: An Empirical Investigation. *Journal of Business Research*, 13(4), 339-359.
- CIA World Factbook (2011). <https://www.cia.gov/library/publications/the-world-factbook/>

- Cohn, G. (1998). The Jewish View on Paying Taxes. *Journal of Accounting, Ethics & Public Policy*, 1(2), 109-120, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 180-189). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.
- Crowe, M. T. (1944). The Moral Obligation of Paying Just Taxes, *The Catholic University of America Studies in Sacred Theology* No. 84.
- Cullis, J. & P. Jones. (1998). *Public Finance and Public Choice*, 2nd edition. New York: Oxford University Press.
- Dawson, L. M. (1997). Ethical Differences Between Men and Women in the Sales Profession. *Journal of Business Ethics*, 16(11), 1143-1152.
- DeMerville, W. (1998). The Ethics of Tax Evasion: A Baha'i Perspective. *Journal of Accounting, Ethics & Public Policy*, 1(3), 356-368, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 230-240). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.
- Friedman, W. J., A. B. Robinson & B. L. Friedman. (1987). Sex Differences in Moral Judgments? A Test of Gilligan's Theory. *Psychology of Women Quarterly*, 11, 37-46.
- Gronbacher, G.M.A. 1998. Taxation: Catholic Social Thought and Classical Liberalism. *Journal of Accounting, Ethics & Public Policy*, 1(1), 91-100, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 158-167). Dumont, NJ: The Dumont Institute for Public Policy Research, Dumont, NJ, 1998.
- Gupta, R. & R. W. McGee. (2010a). A Comparative Study of New Zealanders' Opinion on the Ethics of Tax Evasion: Students v. Accountants. *New Zealand Journal of Taxation Law and Policy*, 16(1), 47-84.
- Gupta, R. & R. W. McGee. (2010a). Study on Tax Evasion Perceptions in Australasia. *Australian Tax Forum*, 25(4), 507-534.
- Harris, J. R. (1990). Ethical Values of Individuals at Different Levels in the Organizational Hierarchy of a Single Firm. *Journal of Business Ethics*, 9(9), 741-750.
- Hegarty, W.H. & H.P. Sims, Jr. (1978). Some Determinants of Unethical Decision Behavior: An Experiment. *Journal of Applied Psychology*, 63(4), 451-457.
- Hyman, D. N. (1999). *Public Finance: A Contemporary Application of Theory to Policy*, sixth edition. Orlando: Harcourt Brace.
- Internal Revenue Service. (1978). *A Dictionary of Compliance Factors*, Office of the Assistant Commissioner Research Division.
- Internal Revenue Service. (1983). *Income Tax Compliance Research: Estimates for 1973-1981*. Office of the Assistant Commissioner Research Division.
- Jalili, A. R. (2012). The Ethics of Tax Evasion: An Islamic Perspective. In Robert W. McGee (Ed.), *The Ethics of Tax Evasion in Theory and Practice* (forthcoming). New York: Springer.

- Kaplow, L. (2008). *The Theory of Taxation and Public Economics*. Princeton & Oxford: Princeton University Press.
- Kelley, S.W., O.C. Ferrell & S.J. Skinner. (1990). Ethical Behavior Among Marketing Researchers: An Assessment of Selected Demographic Characteristics. *Journal of Business Ethics*, 9(8), 681-688.
- Kidwell, J. M., R. E. Stevens & A. L. Bethke. (1987). Differences in Ethical Perceptions Between Male and Female Managers: Myth or Reality? *Journal of Business Ethics*, 6(6), 489-493.
- Kohut, G. F. & S. E. Corriher. (1994). The Relationship of Age, Gender, Experience and Awareness of Written Ethics Policies to Business Decision Making. *S.A.M. Advanced Management Journal*, 59(1), 32-39.
- Marlow, Michael L. (1995). *Public Finance: Theory and Practice*. Orlando: Harcourt Brace.
- Martinez, L. P. (1994). Taxes, Morals, and Legitimacy. *Brigham Young University Law Review*, 1994, 521-569.
- Martinez-Vazquez, J. & B. Torgler. (2009). The Evolution of Tax Morale in Modern Spain. *Journal of Economic Issues*, 43(1), 1-28.
- McGee, R. W. (1994). Is Tax Evasion Unethical? *University of Kansas Law Review*, 42(2), 411-35.
- McGee, R. W. (1997). The Ethics of Tax Evasion and Trade Protectionism from an Islamic Perspective, *Commentaries on Law & Public Policy*, 1, 250-262.
- McGee, R. W. (Ed.). (1998a). *The Ethics of Tax Evasion*. Dumont, NJ: The Dumont Institute for Public Policy Research.
- McGee, R. W. (1998b). Christian Views on the Ethics of Tax Evasion. *Journal of Accounting, Ethics & Public Policy*, 1(2), 210-225. Reprinted at <http://ssrn.com/abstract=461398>.
- McGee, R. W. (1998c). When Is Tax Evasion Unethical? In Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (p-p. 5-35). Dumont, NJ: The Dumont Institute.
- McGee, R. W. (1998d). The Ethics of Tax Evasion in Islam, in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 214-219). Dumont, NJ: The Dumont Institute.
- McGee, R. W. (1998e). The Ethics of Tax Evasion in Islam: A Comment. *Journal of Accounting, Ethics & Public Policy*, 1(2), 162-168, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 214-219). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.
- McGee, R. W. (1998f). Jewish Views on the Ethics of Tax Evasion, *Journal of Accounting, Ethics & Public Policy*, 1(3), 323-336.
- McGee, R. W. (1999a). Is It Unethical to Evade Taxes in an Evil or Corrupt State? A Look at Jewish, Christian, Muslim, Mormon and Baha'i Perspectives. *Journal of Accounting, Ethics & Public Policy*, 2(1), 149-181. Reprinted at <http://ssrn.com/abstract=251469>.

-
- McGee, R. W. (1999b). An Ethical Look at Paying Your “Fair Share” of Taxes. *Journal of Accounting, Ethics & Public Policy*, 2(2), 318-328. Reprinted at <http://ssrn.com/abstract=242549>.
- McGee, R. W. (1999c). Why People Evade Taxes in Armenia: A Look at an Ethical Issue Based on a Summary of Interviews. *Journal of Accounting, Ethics & Public Policy*, 2(2), 408-416. Reprinted at <http://ssrn.com/abstract=242568>.
- McGee, R. W. (2000). Taxation in the Republic of Armenia: An Overview and Discussion from the Perspectives of Law, Economics and Ethics, *ILSA Journal of International & Comparative Law*, 7(1), 97-109.
- McGee, R. W. (2004). *The Philosophy of Taxation and Public Finance*. Norwell, MA and Dordrecht: Kluwer Academic Publishers.
- McGee, R. W. (2006a). Three Views on the Ethics of Tax Evasion. *Journal of Business Ethics*, 67(1), 15-35.
- McGee, R. W. (2006b). A Survey of International Business Academics on the Ethics of Tax Evasion. *Journal of Accounting, Ethics & Public Policy*, 6(3), 301-352.
- McGee, R. W. (2006c). The Ethics of Tax Evasion: A Survey of Romanian Business Students and Faculty. *The ICFAI Journal of Public Finance*, 4(2), 38-68. Reprinted in Robert W. McGee & Galina G. Preobragenskaya, *Accounting and Financial System Reform in Eastern Europe and Asia* (pp. 299-334). New York: Springer, 2006.
- McGee, R. W. (2006d). A Comparative Study of Tax Evasion Ethics in Thailand and Vietnam. *Journal of Accounting, Ethics & Public Policy*, 6(1), 103-123.
- McGee, R. W. & A. Bernal (2006). The Ethics of Tax Evasion: A Survey of Business Students in Poland. In Mina Balamoune-Lutz, Alojzy Z. Nowak & Jeff Steagall (Eds.), *Global Economy -- How It Works* (pp. 155-174). Warsaw: University of Warsaw & Jacksonville: University of North Florida. Reprinted at <http://ssrn.com/abstract=875434>.
- McGee, R. W. & T. Maranjyan (2006). Tax Evasion in Armenia: An Empirical Study. Working Paper No. 06/10, Armenian International Policy Research Group, Washington, DC.
- McGee, R. W., I. Nickerson & W. Fees (2006). German and American Opinion on the Ethics of Tax Evasion. *Proceedings of the Academy of Legal, Ethical and Regulatory Issues* (Reno), 10(2), 31-34.
- McGee, R. W. & Z. Guo (2007). A Survey of Law, Business and Philosophy Students in China on the Ethics of Tax Evasion. *Society and Business Review*, 2(3), 299-315.
- McGee, R. W., C. Noronha & M. Tyler (2007). The Ethics of Tax Evasion: a Survey of Macau Opinion. *Euro Asia Journal of Management*, 17(2), 123-150. Reprinted in Robert W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 283-313), Hyderabad, India: ICFAI University Press, 2009.
- McGee, R. W. & S. López Paláu (2007). The Ethics of Tax Evasion: Two Empirical Studies of Puerto Rican Opinion. *Journal of Applied Business and Economics*, 7(3), 27-47. Reprinted in Robert W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 314-342). Hyderabad, India: ICFAI University Press, 2009.

- McGee, R. W. (2008a). Opinions on Tax Evasion in Thailand, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 609-620). New York: Springer.
- McGee, R. W. (2008b). A Survey of Vietnamese Opinion on the Ethics of Tax Evasion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 663-674). New York: Springer.
- McGee, R. W., J. Alver & L. Alver (2008). The Ethics of Tax Evasion: A Survey of Estonian Opinion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 461-480). New York: Springer.
- McGee, R. W. & Y. An (2008). A Survey of Chinese Business and Economics Students on the Ethics of Tax Evasion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 409-421). New York: Springer.
- McGee, R. W., M. Basic & M. Tyler (2008). The Ethics of Tax Evasion: A Comparative Study of Bosnian and Romanian Opinion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 167-183). New York: Springer.
- McGee, R. W. & Y.Y. Butt (2008). An Empirical Study of Tax Evasion Ethics in Hong Kong. Proceedings of the International Academy of Business and Public Administration Disciplines (IABPAD), Dallas, April 24-27, 72-83.
- McGee, R. W. & G. M. Cohn (2008). Jewish Perspectives on the Ethics of Tax Evasion. *Journal of Legal, Ethical and Regulatory Issues*, 11(2), 1-32.
- McGee, R. W., S.S.M. Ho & A.Y.S. Li (2008). A Comparative Study on Perceived Ethics of Tax Evasion: Hong Kong vs. the United States. *Journal of Business Ethics*, 77(2), 147-158.
- McGee, R. W. & C. Lingle (2008). The Ethics of Tax Evasion: A Survey of Guatemalan Opinion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 481-495). New York: Springer.
- McGee, R. W. & T. B. Maranjyan (2008). Opinions on Tax Evasion in Armenia, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 277-307). New York: Springer.
- McGee, R. W. & B. M'Zali (2008). Attitudes toward Tax Evasion in Mali, in Robert W. McGee, editor, *Taxation and Public Finance in Transition and Developing Economies* (pp. 511-517). New York: Springer.
- McGee, R. W. & C. Noronha (2008). The Ethics of Tax Evasion: A Comparative Study of Guangzhou (Southern China) and Macau Opinions. *Euro Asia Journal of Management*, 18(2), 133-152.
- McGee, R. W. & G. G. Preobragenskaya (2008). A Study of Tax Evasion Ethics in Kazakhstan, in Robert W. McGee, editor, *Taxation and Public Finance in Transition and Developing Economies* (pp. 497-510). New York: Springer.

-
- McGee, R. W. & M. J. Rossi (2008). A Survey of Argentina on the Ethics of Tax Evasion, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 239-261). New York: Springer.
- McGee, R. W. & R. Tusan (2008). The Ethics of Tax Evasion: A Survey of Slovak Opinion, in Robert W. McGee, editor, *Taxation and Public Finance in Transition and Developing Economies* (pp. 575-601). New York: Springer.
- McGee, R. W. (2009). Views toward Tax Evasion: A Comparative Study of Moldova and Romania. *ICFAI University Journal of Public Finance*, 7(3&4), 7-24.
- McGee, R. W. & S. N. Vittadini Andres (2009). The Ethics of Tax Evasion: Case Studies of Taiwan, in Robert W. McGee, *Readings in Business Ethics* (pp. 200-228). Hyderabad, India: ICFAI University Press. An abbreviated version was published in Marjorie G. Adams and Abbass Alkhafaji (Ed.), *Business Research Yearbook: Global Business Perspectives*, Volume XIV, No. 1 (pp. 34-39). Beltsville, MD: International Graphics: Beltsville, MD, 2007.
- McGee, R. W., M. Basic & M. Tyler (2009). The Ethics of Tax Evasion: A Survey of Bosnian Opinion, *Journal of Balkan and Near Eastern Studies*, 11(2), 197-207.
- McGee, R. W., S. Benk, A. M. Ross & H. Kılıçaslan (2009). An Empirical Study of Ethical Opinion in Germany. *Journal of Accounting, Ethics & Public Policy*, 10(2), 243-259.
- McGee, R. W. & S. Bose (2009). The Ethics of Tax Evasion: A Survey of Australian Opinion, in Robert W. McGee, *Readings in Business Ethics* (pp. 143-166). Hyderabad, India: ICFAI University Press.
- McGee, R. W. & W. Gelman (2009). Opinions on the Ethics of Tax Evasion: A Comparative Study of the USA and Six Latin American Countries. *Akron Tax Journal*, 24, 69-91.
- McGee, R. W. & B. M'Zali (2009). The Ethics of Tax Evasion: An Empirical Study of French EMBA Students, in Robert W. McGee, *Readings in Business Ethics* (pp. 185-199). Hyderabad, India: ICFAI University Press. An abbreviated version was published in Marjorie G. Adams and Abbass Alkhafaji (Eds.), *Business Research Yearbook: Global Business Perspectives*, Volume XIV, No. 1 (pp. 27-33). Beltsville, MD: International Graphics, 2007).
- McGee, R. W., I. Nickerson & W. Fees (2009). When Is Tax Evasion Ethically Justifiable? A Survey of German Opinion, in Robert W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 365-389). Hyderabad, India: ICFAI University Press.
- McGee, R. W. & S. R. Smith (2009). Ethics and Tax Evasion: A Comparative Study of Utah and Florida Opinion, in Robert W. McGee (Ed.), *Readings in Accounting Ethics* (pp. 343-364). Hyderabad, India: ICFAI University Press.
- McGee, R.W. & G.A. Goldman (2010). Ethics and Tax Evasion: A Survey of South African Opinion. *Proceedings of the Third Annual University of Johannesburg Faculty of Management Conference*, May 12-14.

- McGee, R. W. & S. Benk (2011). The Ethics of Tax Evasion: A Study of Turkish Opinion. *Journal of Balkan and Near Eastern Studies*, forthcoming.
- McGee, R. W., S. Benk, H. Yıldırım & M. Kayıkçı. (2011). The Ethics of Tax Evasion: A Study of Turkish Tax Practitioner Opinion, *European Journal of Social Sciences*, 18(3), 468-480.
- McGee, R. W. (Ed.) (2012). *The Ethics of Tax Evasion in Theory and Practice*. New York: Springer.
- Musgrave, R.A. (1959). *The Theory of Public Finance: A Study in Public Economy*. New York: McGraw-Hill.
- Musgrave, R.A. (1986). *Public Finance in a Democratic Society. Volume II: Fiscal Doctrine, Growth and Institutions*. New York: New York University Press.
- Musgrave, R.A. & P.B. Musgrave (1976). *Public Finance in Theory and Practice*, 2nd edition. New York: McGraw-Hill.
- Musgrave, R.A. & A.T. Peacock (Eds.) (1958). *Classics in the Theory of Public Finance*. London & New York: Macmillan.
- Nasadyuk, I. & R. W. McGee (2008). The Ethics of Tax Evasion: An Empirical Study of Business and Economics Student Opinion in Ukraine, in Robert W. McGee (Ed.), *Taxation and Public Finance in Transition and Developing Economies* (pp. 639-661). New York: Springer.
- Pennock, R. T. (1998). Death and Taxes: On the Justice of Conscientious War Tax Resistance. *Journal of Accounting, Ethics & Public Policy*, 1(1), 58-76, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 124-142). Dumont, NJ: The Dumont Institute for Public Policy Research (1998).
- Ricardo, D. (1817; 1996). *Principles of Political Economy and Taxation*. Amherst, NY: Prometheus Books.
- Rosen, H. S. (1999). *Public Finance*, fifth edition. New York: Irwin/McGraw-Hill.
- Roxas, M. L. & J. Y. Stoneback. (2004). The Importance of Gender Across Cultures in Ethical Decision-Making. *Journal of Business Ethics*, 50, 149-165.
- Ruegger, D. & E. W. King (1992). A Study of the Effect of Age and Gender upon Student Business Ethics. *Journal of Business Ethics*, 11(3), 179-186.
- Sabrin, M. (1995). *Tax Free 2000: The Rebirth of American Liberty*. Lafayette, LA: Prescott Press.
- Schansberg, D. Eric (1998). The Ethics of Tax Evasion within Biblical Christianity: Are There Limits to “Rendering Unto Caesar”? *Journal of Accounting, Ethics & Public Policy*, 1(1), 77-90, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 144-157). The Dumont Institute for Public Policy Research, Dumont, NJ, 1998.
- Serwinek, P. J. (1992). Demographic & Related Differences in Ethical Views Among Small Businesses. *Journal of Business Ethics*, 11(7), 555-566.

- Sikula, A., Sr. & A. D. Costa. (1994). Are Women More Ethical than Men? *Journal of Business Ethics*, 13(11), 859-871.
- Smith, P. L. & E. F. Oakley, III. (1997). Gender-Related Differences in Ethical and Social Values of Business Students: Implications for Management. *Journal of Business Ethics*, 16(1), 37-45.
- Smith, S. R. & K. C. Kimball (1998). Tax Evasion and Ethics: A Perspective from Members of The Church of Jesus Christ of Latter-Day Saints. *Journal of Accounting, Ethics & Public Policy*, 1(3), 337-348, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 220-229). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.
- Tamari, M. (1998). Ethical Issues in Tax Evasion: A Jewish Perspective. *Journal of Accounting, Ethics & Public Policy*, 1(2), 121-132, reprinted in Robert W. McGee (Ed.), *The Ethics of Tax Evasion* (pp. 168-178). Dumont, NJ: The Dumont Institute for Public Policy Research, 1998.
- Torgler, B. (2003a). Tax Morale: Theory and Empirical Analysis of Tax Compliance. Dissertation der Universität Basel zur Erlangung der Würde eines Doktors der Staatswissenschaften.
- Torgler, B. (2004). Tax morale in Asian countries. *Journal of Asian Economics*, 15, 237-266.
- Torgler, B. & F. Schneider (2005). Attitudes Towards Paying Taxes in Austria: An Empirical Analysis. *Empirica*, 32, 231-250.
- Torgler, B. (2006). The Importance of Faith: Tax Morale and Religiosity. *Journal of Economic Behavior & Organization*, 61, 81-109.
- Torgler, B. (2007). *Tax Compliance and Tax Morale: A Theoretical and Empirical Analysis*. Cheltenham, UK & Northampton, MA, USA: Edward Elgar.
- Webber, C. & A. Wildavsky. (1986). *A History of Taxation and Expenditure in the Western World*. New York: Simon & Schuster.
- Weeks, W. A., C. W. Moore, J. A. McKinney & J. G. Longenecker. (1999). The Effects of Gender and Career Stage on Ethical Judgment. *Journal of Business Ethics*, 20(4), 301-313.
- Wood, J. A., J. G. Longenecker, J. A. McKinney & C. W. Moore. (1988). Ethical Attitudes of Students and Business Professionals: A Study of Moral Reasoning. *Journal of Business Ethics*, 7(4), 249-257.
- World Values Survey Data. www.wvsevsdb.com/
- Yusuf, S.M. (1971). *Economic Justice in Islam*. Lahore: Sh. Muhammad Ashraf.

FROM CROSS-FUNCTIONAL TO RANK-SPANNING RADICAL NEW PRODUCT DEVELOPMENT: AN ANALYSIS WITH RECOMMENDATIONS

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ABSTRACT

While CEOs say that innovation is an important source of future growth for their companies, they devote more than twice as much time to financial planning as they do to new product development. Yet, in an environment typified by increased competition, change, and uncertainty, is it surprising if senior executives do not clearly understand what their roles should be in this process?

While there is no one best way to organize new product development, firms do employ many of the same mechanisms. More significant however, is that the use of these mechanisms, and consequently, senior management's involvement, is often markedly different based on how far-reaching of an innovation is being developed.

In this paper, we contend that management's role in radical new product development is to be fully engaged as part of a rank-spanning NPD team. Under this structure, management's responsibilities include: 1. Designing an environment conducive to radical innovation, 2. Deciding which projects get done, and 3. Nurturing the fledgling initiatives to ensure that those that are chosen are implemented well and with the appropriate amount of oversight. In addition, we provide details for each of managements' responsibilities, and examples to demonstrate how leaders can integrate rank-spanning teams into their organization's new product development efforts.

INTRODUCTION

CEOs state that new product development (NPD) is the single most important source of future growth for their companies. However, these same CEOs devote over twice as much time to financial planning as they do to new product development. Especially during times of crisis, business leaders may shift their focus from bolstering innovation to shoring up ongoing operations (Trimble 2009). As scholars note, often "when companies most need to innovate, they are least inclined to do so" (Barsh and Capozzi 2008). Recently, we have seen the disastrous results of CEO obsession with bottom line finances and a corresponding lack of attention to developing new products and services. Instead of focusing so much attention on improving the

bottom line, CEOs and senior executives may want to focus more attention on growing the “top line” – by creating great new products that are the heart and soul of great companies. Yet, the disconnect between the need to innovate and management’s proper role in this process remains.

In this paper, we argue that radical new product development must move from one that merely emphasizes a cross-functional perspective with senior management support, to “rank-spanning” development; whereby senior executives partner, sometimes on a day-to-day basis, with the product development team. Moreover, we explain how management’s role in this process is design an environment conducive to radical innovation, to ensure that the right projects get done, and finally, to make certain that conditions exist so that those few chosen projects are implemented well and with the right amount of oversight. The roles of these rank-spanning senior management members are quite different from those involved in traditional cross-functional development, and represent a relatively unexplored area.

BENEFITS AND ISSUES RELATING TO CROSS-FUNCTIONAL NEW PRODUCT DEVELOPMENT

Between 70% and 80% of U.S. manufacturing firms use teams to “improve productivity, quality, efficiency and overall operating performance” (Longenecker 2001). A *cross-functional* NPD team is a particular variant whereby people with different functional expertise are grouped administratively to work toward a common corporate product development objective. Increasingly, cross-functional teams may include members from outside the organization such as from suppliers and customers.

Multiple studies over the years have established that the use of cross-functional teams are related to higher NPD project success (e.g. Gupta, Raj, and Wilemon 1985, 1986; Gupta and Wilemon 1988, 1996; Larson and Gobeli, 1988; McDonough 2000). As individual members of teams represent function-specific information that feeds into the product-development process, cross-functionality is a fundamental factor of teamwork quality (Hackman 1987; Seers, Petty, and Guzzo 1995). Research has noted that the use of cross-functional teams leads to such bottom-line benefits as enhanced value to customers, reduced errors, and improved productivity (Emery 2009). At the macro level, alignment between cross-functional teams’ tasks and customer requirements leads to increases in organizational growth and viability (Pryor, Singleton, Taneja, and Toombs 2009). Despite these benefits, some issues remain that may in some cases, make achieving product development success through the traditional use of cross-functional teams elusive.

Radical versus Incremental New Product Development

Radical innovation refers to highly-innovative products that have the potential to transform a firm’s prospects, lead to a successful family of products, or launch a new industry.

Often times, these products are based on substantially different technology. Firms have good reason to focus their efforts on such far-reaching, seemingly risky products. For firm's interested in developing a steady stream of new products, radical innovations are critical, as they act as a catalyst for subsequent, renewed rounds of incremental innovations (Harbour and Blackman 2006). Radical innovations have also been found to be significantly related to a company's innovation performance based on first-mover or pioneering advantages (Oke 2007). There is some evidence to indicate that radical new product development may differ from incremental development in a way that argues for more senior management involvement.

Research indicates that teams that were successful in developing highly-innovative new products were much more likely to have close senior management involvement than their unsuccessful counterparts (Lynn and Reilly 2003). That is, rank-spanning NPD teams, whose management is more personally engaged in development than is typically found in traditional cross-functional NPD, may be more likely to help create successful radical products. Although leaving innovation to those at the lower ranks may have its uses, it also has practical limitations that can lead to waste, particularly during uncertain times (Trimble 2009).

Traditional cross-functional NPD is often conducted as part of a structured development process (e.g. Bower and Hout 1988; Cooper 1994, 1998; Eisenhardt and Tabrizi 1995). Under this type of process, a set of discreet product development phases are completed sequentially, with each phase separated by a decision point (Cooper 1998). To be sure, a structured approach offers many benefits, such as helping to reduce the uncertainty inherent in the innovation process (Dosi 1988) by suggesting a series of steps to be completed sequentially, and providing a clear-cut plan for product development and execution (Cooper 1998). Yet, while structured development processes may be successful in the mature and stable markets for which they were created, they may be inappropriate or even detrimental to new product success under circumstances of rapid change (Nunez and Lynn 2007).

A structured approach to new product development has been shown to be rigid, and as a consequence, may reduce adaptability (Rosenthal 1992). Indeed, scholars have suggested that they may be too structured for quickly changing competitive environments (Cooper 1994; Imai, Ikujiro and Takeuchi 1985; Hoopes and Postrel 1999), and may be more appropriate for small, incremental innovations, rather than breakthrough innovations (Susman and Ray 1999, Wind and Mahajan 1997). In addition, sequential approaches may cause functional specialization thereby creating gaps in shared knowledge (Hoopes and Postrel 1999). What may be needed for product development under fast-changing environments is a more adaptable approach. However, flexible teams can only go so far. What's required is someone who can bring to the NPD team the authority to marshal resources necessary for flexibility, and to make decisions to lessen the uncertainty inherent in radical new product development.

Traditional New Product Development May Lack Strategic Focus

While the benefits of using traditional cross-functional NPD have been clearly established, the literature indicates that NPD teams may have difficulty setting off with a clear mandate. McDonough (2000) found that while setting appropriate objectives at the onset of an NPD project is often cited in the literature as a factor that is critical to nurturing success, traditional cross-functional teams often find it difficult to set such goals. Indeed, product development efforts often lack strategic focus and alignment with broader corporate objectives (Bate 2010). Yet, best practice firms have been shown to establish a clear and stable vision that drives new product development objectives (Davidson, Clamen, and Karol 1999; Russell and Tippett 2008; Shepherd and Ahmed 2000). Such clarity of vision is particularly important for radical innovation development (Lynn, et al 2003).

An issue with setting project objectives may indicate difficulty in establishing integration, decision-making, and planning among functionally-distinct members of the NPD team (Barczak and Wilemon 2001; Sethi, Smith, and Park 2001; Thieme, Song, and Shin 2003). Integration in particular, is important to lessening the uncertainty surrounding radical innovation as it is key to discovering complex and novel linkages among market needs, technology and firm resources (Cotterman, Fusfeld, Henderson, Leder, Loweth, and Metoyer 2009). However, traditional cross-functional teams may lack the structural mechanisms to coordinate and facilitate integration.

Even so, the issues surrounding the use of traditional cross-functionality go well beyond those found at the team level. Traditionally, much of senior management participation in new product development comes through involvement in executive review boards. These boards, also called oversight boards, product approval committees, or new product executive groups, may include the chief executive officer, chief operating officer or general manager, and the heads of marketing, engineering, finance and operating areas. Nevertheless, despite a review boards' seemingly broad-based representation, traditional boards typically lack members with the vision as well as the detailed expertise to explain how the new project may lay the foundation for successive initiatives that could benefit the organization.

Review boards have the multifaceted responsibility of deciding which of the various new product opportunities the firm will fund. Decisions to initiate new product development projects, or to continue funding ongoing projects are often based on uncertain information in a changing environment. Priorities must be established for existing projects in different stages of completion that will vie for the same resources as new product initiatives. Often times, this means cutting all of the funding from the least attractive programs (Banholzer 2010). Indeed, evidence indicates that one of most valuable means for organizations to turn around second-rate product development efforts is to concentrate on choosing projects that better capitalize on exploiting invested resources (Pure Insight, 2007). Still, board members with detailed expertise with the new product initiative, coupled with executive-level authority may be more likely to ensure the process remains politically agnostic, and that decisions are being made for the right reasons. For

instance, a new product initiative that aligns with the overall strategy should remain a viable candidate for investment, even if it does not fit well with the current organizational paradigm. A disengaged review board member is unlikely to make such an argument.

Review boards seek to develop a balanced portfolio in terms of a number of decisive factors. Each firm, based on their specific circumstances, determines these factors. Nonetheless, a review board will likely aim to establish the best possible mix of such items as costs to completion, risk versus expected financial reward, probability of technical or commercial success, maintenance versus growth, and short-term versus long-term new product projects. Here, traditional review board funding practices may also inhibit the development of radical products as investing in the development of such products requires courage that a dispassionate board member is less likely to muster.

Today's Faster-Paced Environment

The increased use of cross-functional product development teams has been driven by a growing awareness that functional boundaries can become barriers to agility and effectiveness (Davidson, et al 1999). Yet, traditional NPD teams may not be utilizing the benefits of cross-functionality to their full potential. McDonough noted that team cooperation and capable project leadership are often lacking in traditional cross-functional teams (2000), and are two factors that facilitate agility and effectiveness and are often cited as critical to project success. More importantly however, may be issues surrounding the executive-level process through which new product development projects are approved.

The phase review process is intended to cover all significant product development efforts and allows the review board to examine the expected technical, marketing and financial performance of new product projects to determine whether to proceed or to terminate the effort prior to commercialization (Shepherd, et al 2000). The phase review drives the other product development processes and ensures that product development efforts are in step with the company's objectives and are supported in a manner that improves their odds of success (Cooper, Edgett, and Kleinschmidt 2002; Shepherd, et al 2000). Yet, the phase review process may not offer enough time for those making decisions to become familiar with the new product initiative.

The phase review is often conducted as part of a structured development process. Through each phase, a variety of activities occur across a range of functions. At the conclusion of specific phases, these activities are brought together in the form of specific phase review deliverables that are presented to the review board. For example, the review board meets for gates 3, 4, and 5 (Decision on Business Case, Post Development Review, and Decision to Launch, respectively) of the Stage-gate process (Cooper, et al 2002). However, during these meetings, decisions to "kill" a project may be made for the wrong reasons, such as when projects aren't funded because they are deemed operationally impractical under the current organizational

structure, but where a real customer need exists. What's required is a senior-level manager with the experience, background, and authority to run, and if necessary, change direction on the project as conditions change – one who can break down the structural barriers that organizations often erect for efficiency, but that may be inhibiting innovation under conditions of rapid change.

RANK-SPANNING NEW PRODUCT DEVELOPMENT

While cross-functional teams may be composed of employees from departments spread across an organization, members are generally from the same hierarchical level (Robbins and Judge 2007). This lack of formal senior management representation on the product development team may be the missing ingredient to successful new product development in many cases.

There are many ways to organize teams in support of new product development activities. Nonetheless, rank-spanning cross-functional teams that operate closely under a senior-level executive and reporting to the review board have been found to be among the most effective (Trygg 1993). This is partially due to the leadership and accountability of the senior executive and the high-level of budget control that they are assigned (Shepherd, et al 2000). Others have suggested that senior management's involvement in the new product development arena can take a variety of active forms of engagement including: helping to develop innovative reward systems, supporting cross-functional training, making proactive decisions, encouraging risk-taking while demonstrating a tolerance for failure, actively promoting integration and collaboration, and establishing a resolute commitment to meeting deadlines (Barsh, et al 2008; Davidson, et al 1999; Jassawalla and Sashittal 2003; Rapp, Schillewaert, and Hao 2008; Sethi, et al 2001).

As noted in Figure 1, we propose a more comprehensive three-pronged engagement effort on the part of the senior-executive, to address the conditions under which traditional cross-functional teams may break down. We propose that senior managers become actively engaged members of their product development teams to address the three broad issues that traditional cross-functional development leaves unanswered:

1. *Radical NPD differs from incremental NPD in a way that requires more substantive senior-level involvement*
2. *NPD often lacks strategic focus and alignment with broader corporate objectives*
3. *Traditional new product implementation may not reflect today's faster-paced environment*

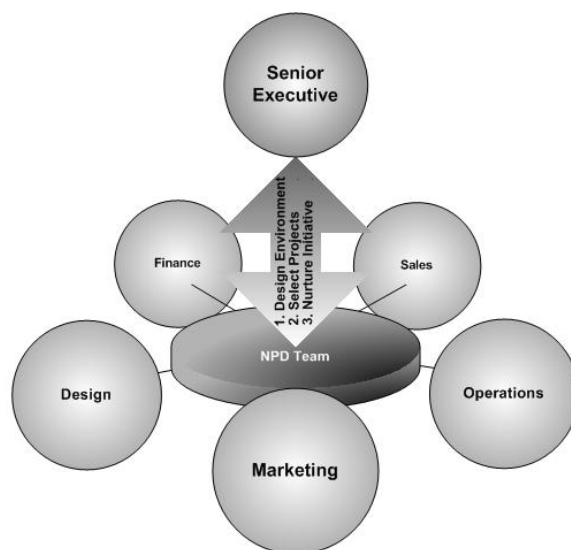


Figure 1: Rank-Spanning New Product Development

As noted above, a rich body of literature has established the benefits of cross-functional new product development whereby senior management maintains less active involvement than we propose. Executives that take a more hands-on role are often portrayed as being micro-managers, compulsively controlling even the smallest project details and ultimately, hindering team innovation. Instead, executives are advised to empower their teams, and then to get out of the way. Earlier scholars may have established this “hands off” foundation by suggesting that innovation springs most effectively when small groups of lower-level organizational members feed function-specific information into a collaborative product-development process with minimal executive-level involvement (e.g. Burgelman 1983a, b; Kimberly 1979; Mintzberg 1979; Quinn 1985). In contrast, our suggested rank-spanning perspective proposes an active, limited, and well-defined role for the senior executive that partners with the NPD team.

To be fair, our view of a much more engaged senior-executive has been advocated by others, albeit with less frequency (e.g. Leifer, McDermott, Colarelli, O’Connor, Peters, Rice, Veryzer, and Rice 2001). Nor is the emergent role of the senior executive overseeing an NPD team new. For instance, in a study of 137 NPD initiatives, Day discovered that executives acted as “dual-role champions”, that is, as both a product champion and organizational sponsor, when the initiative was highly uncertain but not technology-driven (1994).

In this paper, we argue that for radical new product development, a rank-spanning perspective may be the appropriate choice. Under a rank-spanning structure, the role of senior management members of product development teams are to help create an environment conducive to radical innovation, work to decide which projects get done, and finally, to nurture the initiatives to ensure that those that are chosen are implemented well and with the appropriate

amount of oversight. But how critical is senior-level involvement to the ultimate commercial success of a new product initiative? In a ten-year cross-industry research study that investigated the practices of more than 700 new product development teams, Lynn and Reilly note that:

“Blockbuster products do not happen without the intense personal involvement of senior management. Usually that is the CEO – or a person who will be the next CEO or division head. Without the active participation of senior management, we found that new product development teams were unlikely to create blockbusters, a finding that challenges the advice of most management books today.” (2003, p. 33).

As noted in Figure 2 below, Lynn and Reilly found that commercially-successful new products (referred to here as “blockbusters”) were three and one-half times as likely to have senior management intensely involved with the new product development than the unsuccessful teams, and one-third more likely than the merely successful, non-award winners (2003).

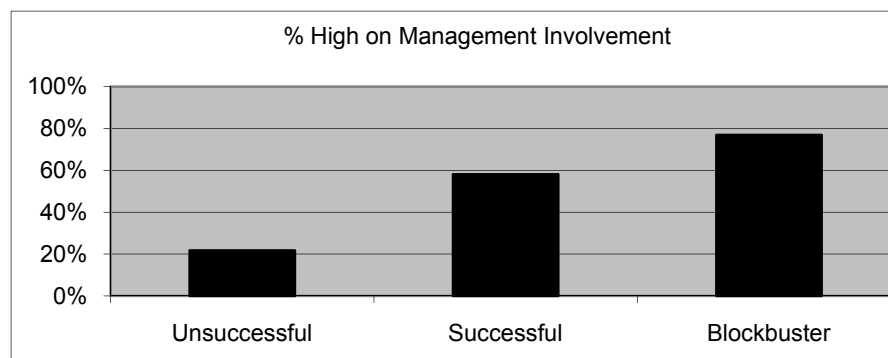


Figure 2: Management Involvement and NPD Success

Perhaps more importantly, senior executives that work as part of a rank-spanning NPD team help to shield new product initiatives as they battle for resources with existing products that are larger, more entrenched, and politically powerful (Banholzer 2010). What’s the alternative? If a senior-level member of the team does not directly intercede on behalf of the new product initiative, existing products will win every time (Trimble 2009).

Issue 1: Radical NPD Differs from Incremental NPD

Priority: Design an Environment where Radical Innovation Development can Flourish

Evidence indicates that radical new product development may require a different approach, and thus, a different level of involvement from senior management, than incremental

development. Under such conditions, traditional cross-functional development efforts may not be optimal. While there is no one best way to organize new product development, firms do employ many of the same mechanisms in their new product development efforts. Nevertheless, it is important to note that the *use* of these mechanisms is often markedly different based on how far-reaching of an innovation is being developed. Consequently, senior management's involvement in these types of projects will be strikingly different than in more routine development efforts.

Best in class, albeit "routine" development efforts are characterized by efficiency-seeking structured approaches, with senior management striving to maintain a balance between their authority and the development team's empowerment (Shepherd, et al 2000). Senior management takes on a much different role however, when pursuing extreme innovation. On radical innovation development teams, senior managers frequently take an unusually intimate and active role — sometimes even participating on a day-to-day basis in the actual project development process (Cotterman, et al 2009). More frequently, senior managers help the team to reach decisions quickly and have the necessary resources and authority to cut through red tape (Lynn, et al 2003). Here, their job is to immerse themselves in the process, and encourage a far less structured approach (Davidson, et al 1999; Lynn, et al 2003). Instead, what's needed are senior executives that partner with the development team, offering their unique expertise to both the organization and to it's members to help define and build business cases for strategically fertile areas for growth, establish a culture of creativity and innovation that accommodate experimentation and organizational learning, and support the processes that lead to successful innovation (Bate 2010; Cotterman, et al 2009; McLean 2009; Oldham and Cummings 1996; Paulson, O'Connor, Robeson 2007; Russell et al 2008).

On successful rank-spanning product development teams working on radical innovation, senior managers were active participants in the projects right from the beginning, even if this was not the norm at the company for their new product initiatives (Lynn, et al 2003). Such deep involvement was especially true if the project represented a substantial cost or a strategic redirection for the firm (see also Leifer, et al 2001).

Given the uncertainty associated with radical development projects, teams must also have the flexibility, but more importantly, the authority, to improvise when necessary. Successful product development processes balance standardization with flexibility, and include a process characterized by improvisation when developing highly innovative, successful products (Lynn, et al 2003). An improvisational development approach has also been found to positively impact new product success in rapidly changing and uncertain market conditions (Nunez et al 2007; Pattinson and Woodside 2009). In addition, research on radical new product development efforts suggests that the degree to which teams are able to learn and act from prior efforts - often in unpredictable ways - is the key to developing new products successfully in uncertain environments (Lynn, Mazzuca, Morone, and Paulson 1998). In recent years, even highly-structured approaches such as the Stage-gate process, which was first introduced in the mid-1980s, have been adapted to reflect today's faster-paced product development environment

(Cooper 2009). Consequently, it is imperative that senior management allows for and encourages such flexibility.

The following discusses the procedures firms utilize in their product development initiatives, and how the use of these procedures and consequently, senior management's involvement, is often strikingly different based on the innovativeness of the product being developed.

Issue 2: NPD Lacks Strategic Focus and Alignment with Corporate Objectives

Priority: Rational Selection: Maximizing Review Boards and Portfolio Management

Executive review boards typically govern senior management's participation in new product development. Yet, despite have a formal mechanism in place to oversee corporate product development, firms' product development efforts often lack strategic focus and alignment with broader objectives (Bate 2010). Therefore, in this role, the rank-spanning senior-executive acts as part savvy politician, part new product expert, and has the delicate responsibility to bridge the threshold between the NPD team and the organization as a whole. Here, the rank-spanning executive's job is to help explore the intricate relationships among market needs, the new product's technology, and the firm's resources.

Central to the review boards' responsibility is the portfolio management function (Banholzer 2010; Cooper, Edgett, and Kleinschmidt 1997abc, 1998; Shepherd, et al 2000). Effective portfolio management is critical to an organization's successful NPD efforts as they enhance product development performance and profitability, and result in better alignment with business strategy (Killen, Hunt, and Kleinschmidt 2008; Pure Insight 2007). Organizations that effectively rank and prioritize projects through a well-defined portfolio management process meet their product development objectives 80% of the time, while their less-effective counterparts meet their goals on less than 40% of their projects (Brown 2006). Effective portfolio management ensures that firm resources are allocated to new development projects according to corporate strategy in a balanced manner (Cooper and Edgett 2008). However, balanced does not mean that all projects will be treated equally during the budget process, whereby existing projects' funding are reduced by an equal amount across the board. Instead, the rank-spanning senior executive must use the review board mechanism to make hard, rational funding decisions, and not allow the process to succumb to politically powerful organizational influences that can impact new product decision making (Christiansen and Varnes 2008). Here, ensuring that the procedures that govern decisions are made in as fair a manner as possible, while politically shielding the rest of the NPD team is critical. Procedural justice in top management decisions has been found to be positively related to collaborative problem solving, which in turn, may lead to new product performance (Li, Bingham, and Umphress 2007).

Also, review boards may strive to fund projects in order to maximize the portfolio's value with respect to a corporate objective (e.g. expected financial return) (Barsh, et al 2008; Cooper, et al 1997a). Yet, even these decisions are often not as straight-forward as they first appear, as project selection must also account associated interdependencies. Unprofitable new projects may lay the technological foundation for subsequent, larger-scale strategic initiatives or may help reduce the risk associated with existing products (Eager 2010; Paulson et al 2007). As perhaps the only person within the firm with the hands-on product expertise, an appreciation for the organizations' vision and objectives, and the authority to directly influence and implement that vision, the rank-spanning executive adds distinctive value to the organization's product development efforts.

Review boards must also show courage in funding strategically fertile areas for growth. Consider Apple, whose increase in R&D funding led directly to the iTunes music service and the iPod digital device (Rhodes and Stelter 2009). The fact that Apple decided to increase R&D expenditures by 13% during the 2001 – 2003 recession, while revenue was falling by 33%, made the decision that much more courageous. Executives with a personal commitment to a new product initiative are seemingly more likely to show such courage. Even so, allocating limited development resources for one project may require removing resources from another. Consequently, setting project priorities; and at times, canceling and reprioritizing projects, is fundamental to portfolio management.

The portfolio management function is an opportunity to refocus and realign product development efforts, ensuring that products being developed fit the company's strategy, and to moderate the risk associated with innovative product initiatives (Barsh et al 2008, Eager 2010). One approach to portfolio management is to align product development with the firm's strategy is to use a top-down strategy model such as Strategic Buckets or Strategic Checks methods. These methods are designed to ensure that the portfolio reflects the firm's strategy by reserving funds for different types of projects (Cooper, et al 1997bc; Terwiesch and Ulrich 2008). Another approach to achieving alignment between the development efforts and the firm's strategy is to build strategic criteria into the project prioritization models and into the gates of the development process themselves (Cooper, et al 1997bc).

The specific portfolio methods used by the firm may be influenced by the review board's desire to stress one objective over another (Cooper, et al 1997a). For example, emphasizing the value of allocated resources over alignment with corporate strategy, or the balance of the portfolio may lead a firm to adopt Expected Commercial Value or Productivity Index type models that seek to maximize the value of the portfolio given certain resource constraints. The mechanism through which the review board implements its vision is the phase review process.

Issue 3: Implementation may not reflect Today's Faster-Paced Environment

Priority: Leading Implementation: The New Phase Review Process

Review boards use the phase review process to make high-level product decisions, fund product development efforts, provide leadership to and empower the development teams (Becker 2003; Shepherd, et al 2000). Yet, despite the centrality of the phase review process to an organization's new product development efforts, the process necessitates that participants engage in responsibilities that may not offer enough time for those making decisions to become familiar with the new product initiative.

Typically, members of review boards are expected to commit 10 – 15% of their time to oversight activities that include making strategic-level product decisions, allocating resources to product development efforts, resolving cross-product issues, and cultivating the development process. The phase review drives the other product development processes and ensures that product development efforts are in step with the company's objectives and are supported in a manner that improves their odds of success (Cooper, et al 2002; Shepherd, et al 2000).

Perhaps more importantly, the phase review process can act as a mechanism through which senior management can ensure that product development decisions align with what others have called the firm's "strategic frontier" - the environmental changes most likely to impact the firm in the future (Bate 2010). Here again, the rank-spanning executive can offer an unequalled perspective that comes from understanding the resources available to confront the opportunities and challenges likely to be encountered by the organization, as well as the details of the product being developed in response to that future.

The phase review is often conducted as part of a structured development process. The role of the rank-spanning executive as part of the phase review team however, is to ensure that the process maintains flexibility. For instance, radical new product development may require a change in direction as conditions change or opportunities emerge. Here, the rank-spanning executive leverages authority to marshal the resources necessary for flexibility. To help manage the complexity that an increase in flexibility is likely to create, review teams can employ powerful product portfolio management software that offers both an overview of the project, as well as detailed information on each stage of the product development process (Becker 2003).

During the phase review meetings, the board makes the decision to either fund the program, allowing it to continue to the next phase, directs the team to refocus, or terminates the development effort (Davidson, et al 1999). Thus, the phase review process enables the review board to examine and fund projects based on an increasing understanding of an emerging opportunity. The rank-spanning executive adds value by ensuring that decisions truly align with the organization's greater objectives. For instance, a radical new product may be developed in pursuit of a customer need, but may proceed along a line that's deemed as operationally inefficient under the current organizational structure. Here, the rank-spanning executive helps to

break down the organizational barriers that may be inhibiting innovation while mitigating organizational risk. Lynn and Reilly (2003) observed this process in action on teams developing radical innovations. They note that on some teams the CEO or senior manager functioned as an executive sponsor and typically provided funding to the project in “chunks.” As far back as the IBM PC project, the CEO at the time, Frank Cary, received monthly reports from project director Bill Lowe. Cary would then release the next installment of cash for the project, until he became comfortable enough with the team’s progress to give them the rest of the funds. Such approaches, while not new, still remain relatively uncommon. As a consequence, risk is mitigated to some extent by allowing faltering programs to be terminated or refocused prior to the development phase, when most resources are expended.

While it is important to find a balance between the review board’s authority and the empowerment exercised by the new product development teams for routine development, senior management plays a much different function on radical innovation development teams. On these types of teams, the executive retains control of the team; thereby allowing both team and senior management to feel confident the team is on the right track. The development teams are empowered because they have the authority of the senior-manager behind them (Lynn, et al 2003).

THE COST OF NON-INVOLVEMENT

What happens when senior management is barely paying attention? The research indicates that this is a recipe for failure (Chacar and Surysekar 2009; Lynn, et al 2003). Yet that is a typical tactic—senior management is involved at the kick-off, and then pulls back and maintains a low profile until the design is complete, coming into the picture when a large financial commitment is needed to begin production, or when the product is being readied for national launch. This is how projects run into trouble.

Yet, the management style of keeping oneself distant from the day-to-day-operation was not found on radical innovation development teams. Nor did “management by walking around” work. Instead, the active participation of a very senior manager on the project conveyed the strong and clear message that what the team was killing itself for, with long hours and late nights, was worth it. If the team succeeded, they would be praised and compensated. If they had a problem, the senior manager could help them solve it quickly. That seems to be the approach taken by Apple, considered by consumers to be the world’s most innovative brand (Incite 2009). Steve Jobs, Apple’s pertinacious leader, reportedly obsesses over every aspect of the firm’s product development, often working side-by-side with his designers. Indeed, Jobs has personally shepherded Apple’s latest creation, the iPad, for years, reportedly even while recovering from major surgery (Lyons 2010).

Although this kind of day-to-day participation by senior executives has been out of favor for some time, others have begun suggesting a return to this style of management (e.g. Boss

2000). Moreover, research indicates that firms with senior executives that are highly-engaged in new product development are able to generate new products that are more innovative (Sethi, et al 2001) and are more likely to be confident in their decision-making and risk-mitigation processes (Barsh, et al 2008), while those with less involved management may have a more difficult time generating radical innovations (Chacar, et al 2009). To use famous examples of past radical innovation developments, consider: Tom Watson, the former CEO of IBM, who took a critical role in the development of the first general-purpose mainframe computer. Akio Morita, Sony's Chairman, was also the key figure in Sony's development of the Walkman. Canon task force leader Hiroshi Tanaka held up a can of beer and wondered if they could make the copier drum out of aluminum. The result was the plain paper copier.

LIMITATIONS AND FUTURE RESEARCH

Having senior management on a new product development team can be a double-edged sword. Senior managers can hurt team effectiveness if they second guess the team, change the vision capriciously, swoop in and out, transfer people off the team, or take too long to make decisions. The team is likely to complain among themselves that the senior manager is holding up progress rather than contributing to the effort. What's needed is a rank-spanning senior executive that brings consistency, and helps keep the team stable during the periods of turmoil and uncertainty. The job is to be instrumental in creating the specific, immutable goals for the product that the team *must* deliver, to help the team remove obstacles in the path to success, and to assist the team in obtaining the necessary tools and resources (Lynn, et al 2003). Teams require active senior management engagement, but that engagement must be supportive and helpful rather than meddling.

Our current analysis has concentrated on issues important to firms engaged in the development of radical innovation. We have argued that for these firms, the addition of a senior-management member to an NPD team may increase innovation success. Specifically, we have proposed that rank-spanning senior-executives actively bolster innovative efforts by designing agile work environments that are conducive to radical innovation; take full advantage of participation on review boards and rethink the portfolio management function; and take an intimate and active role during implementation. We could extend our research to help shed some light on the benefits conveyed by rank-spanning executives that focuses on a significant outcome of NPD processes. An initial way to do this could include assessing how NPD projects that included rank-spanning executives meet cost expectations versus those that utilized traditional cross-functional teams.

Fast changing environments generate uncertainty (Marsh and Stock 2003) that impacts innovative efforts. Trimble argued that leaving innovation to those at the lower levels of an organization has limitations that can lead to waste, particularly during uncertain times (2009). In this paper, we have argued that rank-spanning executives with the experience, background, and

authority to change direction on the project as conditions change on the ground are useful when developing radical innovation. In short, we have argued the benefits of allowing rank-spanning executives to improvise when necessary. Yet, while improvisation is considered costly (e.g. Miner, Bassoff, and Moorman 2001; Sharkansky and Zalmanovitch 2000), it allows the generation of situation specific knowledge (Eisenhardt and Martin 2000) which in turn, reduces uncertainty (Morabito, Sack, and Bhate 1999) inherent in radical new product development. A useful analysis would quantify the conditions under which this increased flexibility is constructive versus detrimental to innovative efforts.

REFERENCES

- Banholzer, W. F. (2010). Creating Value in Turbulent Times, *Research Technology Management*, Jan/Feb, 53(1): 23.
- Barczak, G., and D. L. Wileman (2001). Factors Influencing Product Development Team Satisfaction, *European Journal of Innovation Management*, 4(1).
- Barsh, J., and M. M. Capozzi (2008). Managing Innovation Risk, *Strategic Finance*. Apr, 89(10): 13.
- Bate, J. D. (2010). How to explore for innovation on your organization's strategic frontier, *Strategy & Leadership*, 38(1): 32.
- Becker, T. (2003). More Innovation for Fewer \$s, *Strategic Direction*, Jan, 19(1)
- Boss, R.W. (2000). Is the Leader Really Necessary? The Longitudinal Results of Leader Absence in Team Building, *Public Administration Quarterly*, 23: 471-486.
- Bower, J. and T.M. Hout (1988). Fast-Cycle Capability for Competitive Power, *Harvard Business Review*. Nov/Dec, 66(6): 110.
- Brown, J. (2006). *The Product Portfolio Management Benchmark Report: Achieving Maximum Product Value*, Aberdeen Group, Aug.
- Burgelman, R. A. (1983a). Corporate Entrepreneurship and Strategic Management: Insights from a Process Study, *Management Science*. 29(12): 1349-1364.
- Burgelman, R. A. (1983b). A Process Model of Internal Corporate Venturing in the Diversified Major Firm, *Administrative Science Quarterly*. 28: 223-244.
- Chacar, A. S., and K. Surysekar (2009). A Survey Of New Product Development: Can Decentralization Alone Deliver?, *The Review of Business Information Systems*. Fourth Quarter. 13(4): 79.
- Christiansen, J. K., and C. Varnes (2008). From Models to Practice: Decision Making at Portfolio Meetings, *The International Journal of Quality & Reliability Management*, 25(1): 87.

- Cooper, R.G. (1994). Third-Generation New Product Processes, *Journal of Product Innovation Management*, 11: 3 - 14.
- Cooper, R.G. (1998). Benchmarking New Product Performance: Results of the Best Practice Study, *European Management Journal*, Feb, 16(1)
- Cooper R. G. (2009). How Companies Are Reinventing Their Idea-To-Launch Methodologies, *Research Technology Management*. Mar/Apr., 52(2): 47.
- Cooper, R. G., and S. J. Edgett (2008). Maximizing Productivity in Product Innovation, *Research Technology Management*. Mar/Apr, 51(2): 47.
- Cooper, R.G., S.J. Edgett, and E. Kleinschmidt (1997a). Portfolio management in new product development: Lessons from the leaders-I, *Research Technology Management*, Sep/Oct, 40 (5)
- Cooper, R.G., S.J. Edgett, and E. Kleinschmidt (1997b). Portfolio management in New Product Development: Lessons from the Leaders-II, *Research Technology Management*, Nov/Dec, 40 (6)
- Cooper, R.G., S.J. Edgett, and E. Kleinschmidt (1997c). R&D Portfolio Management: Best Practices Study
- Cooper, R.G., S.J. Edgett, and E. Kleinschmidt (1998). Best Practices for Managing R&D Portfolios, *Research Technology Management*, Jul/Aug, 41 (4)
- Cooper, R.G., S.J. Edgett, and E. Kleinschmidt (2002). Optimizing the Stage-Gate Process: What Best-Practice Companies Do-II, *Research Technology Management*, Nov/Dec, 45 (6)
- Cotterman, R., A. Fusfeld, P. Henderson, J. Leder, C. Loweth, and A. Metoyer (2009). Aligning Marketing and Technology to Drive Innovation, *Research Technology Management*. Sep/Oct, 52(5): 14.
- Davidson, J.M., A. Clamen, and R.A. Karol (1999). Learning from the Best New Product Developers, *Research Technology Management*, 42(4).
- Day, D.L. (1994). Raising Radicals: Different Processes for Championing Innovative Corporate Ventures, *Organization Science*, 5(2): 148-172.
- Dosi, G. (1988). "The Nature of the Innovation Process" in *Technical Change and Economic Theory*, G. Dosi, C. Freeman, R. Nelson, G. Silverberg, L. Soete (eds.), London: Pinter.
- Eager, A. (2010). Designing a Best-In-Class Innovation Scorecard, *Research Technology Management*. Jan/Feb, 53(1): 11.
- Eisenhardt, K.M. and J.A. Martin (2000). Dynamic Capabilities: What Are They?, *Strategic Management Journal*, 21.
- Eisenhardt, K.M.. and B.N. Tabrizi (1995). Accelerating Adaptive Processes: Product Innovation in the Global Computer Industry, *Administrative Science Quarterly*, 40(1).

-
- Emery, C.R. (2009). A Cause-Effect-Cause Model for Sustaining Cross-Functional Integration, *Business Process Management Journal*. 15(1): 93
- Gupta, A.K., S.P. Raj, and D.L. Wilemon (1985). R & D and Marketing Dialogue in High-Tech Firms, *Industrial Marketing Management*, Nov, 14(4): 289.
- Gupta, A.K., S.P. Raj, and D.L. Wilemon (1986). A Model for Studying R&D-Marketing Interface in the Product Innovation Process, *Journal of Marketing*, 50(1): 7-17.
- Gupta, A.K. and D.L. Wilemon (1988). The Credibility-Cooperation Connection at the R&D-Marketing Interface, *Journal of Product Innovation Management*, Mar., 5(1): 20.
- Gupta, A.K. and D.L. Wilemon (1996). Changing Patterns in Industrial R&D Management, *Journal of Product Innovation Management*, Nov, 13(6): 497.
- Hackman, J.R. (1987). *Handbook of Organizational Behavior*, Prentice-Hall, Englewood Cliffs, NJ.
- Harbour, J. L. and H. S. Blackman (2006). Innovation: The Other "I" Word Associated with Performance, *Performance Improvement*. Feb, 45(2): 24.
- Hoopes, D.G., S. Postrel (1999). Shared Knowledge, "Glitches", and Product Development Performance, *Strategic Management Journal*, 20: 837 – 865.
- Imai, K., N. Ikujiro, and H. Takeuchi (1985). "Managing the New Product Development Process: How Japanese Companies Learn to Unlearn" in *The Uneasy Alliance: Managing the Productivity-Technology Dilemma*, Hayes, Clark (eds), Harvard Business School Press, 337 – 375.
- Incite (2009). The 2009 Innovation League Table. Autumn.
- Jassawalla, A.R. and H.C. Sashittal (2003). Building Collaborative New Product Processes: Why Instituting Teams is Not Enough, *S.A.M. Advanced Management Journal*, 68(1).
- Killen, C. P., R. A. Hunt, and E. J. Kleinschmidt (2008). Project Portfolio Management for Product Innovation, *The International Journal of Quality & Reliability Management*, 25(1): 24.
- Kimberly, J. R. (1979). Issues in the Creation of Organizations: Initiation, Innovation, and Institutionalization, *Academy of Management Journal*, 22: 437-457.
- Larson, E.W. and D.H. Gobeli (1988). Organizing for Product Development Projects, *Journal of Product Innovation Management*. Sep, 5(3): 180.
- Leifer, R., C.M. McDermott, G. Colarelli O'Connor, L.S. Peters, M.P. Rice, R.W. Veryzer, and M. Rice (2001). *Radical Innovation*, Boston: Harvard Business School Press.
- Li, H., J. B. Bingham, and E. E. Umphress (2007). Fairness from the Top: Perceived Procedural Justice and Collaborative Problem Solving in New Product Development, *Organization Science*. Mar/Apr, 18(2): 200.

- Longenecker, C.O. (2001). Building High Performance Management Teams. *Industrial Management*. Nov/Dec, 21-26.
- Lynn, G.S., M. Mazzuca, J.G. Morone, and A.S. Paulson (1998). Learning is the critical success factor in developing truly new products, *Research Technology Management*, 41(3): 45 - 51.
- Lynn, G.S. and R.R. Reilly (2003). *Blockbusters: The Five Keys to Developing Great New Products*: New York, Harper-Collins.
- Lyons, D. (2010). Think Really Different, *Newsweek*. 155(14).
- Marsh, S.J. and G.N. Stock (2003). Building Capabilities in New Product Development through Intertemporal Integration, *Journal of Product Innovation Management*, 20: 136 - 148.
- McDonough, E.F. (2000). Investigation of Factors Contributing to the Success of Cross-Functional Teams. *Journal of Product Innovation Management*, May, 17(3): 221 – 235.
- McLean, J. (2009). A Place for Creativity in Management?, *The British Journal of Administrative Management*. Autumn, 30.
- Miner, A.S., P. Bassoff, and C. Moorman (2001). Organizational Improvisation and Learning: A Field Study, *Administrative Science Quarterly*, 46(2): 304 – 337.
- Mintzberg, H. (1979). *The Structuring of Organizations*, Englewood Cliffs, New Jersey: Prentice-Hall.
- Morabito, J., I. Sack, and A. Bhate (1999). *Organization Modeling: Innovative Architectures for the 21st Century*, Prentice Hall.
- Nunez, E., and G. Lynn (2007). Entrepreneurial Environments Call for Novel Approaches to New Product Development: An Examination of an Integrative Approach, *Business Journal for Entrepreneurs*, Mar, 1(1): 109.
- Oke, A. (2007). Innovation Types and Innovation Management Practices in Service Companies, *International Journal of Operations & Production Management*. 27(6): 564.
- Oldham, G.R and Cummings, A (1996). Employee creativity: Personal and contextual factors at work, *Academy of Management Journal*, 39: 607-634.
- Pattinson, H. M., and A. G. Woodside (2009). Capturing and (Re)Interpreting Complexity in Multi-Firm Disruptive Product Innovations, *The Journal of Business & Industrial Marketing*. 24(1): 61.
- Paulson, A. S., G. Colarelli O'Connor, and D. Robeson (2007). Evaluating Radical Innovation Portfolios, *Research Technology Management*. Sep/Oct, 50(5): 17.
- Pryor, M.G., L.P. Singleton, S. Taneja, and L.A. Toombs (2009). Teaming as a Strategic and Tactical Tool: An Analysis with Recommendations, *International Journal of Management*. Aug, 26(2): 320.

-
- Pure Insight (2007), Managing the Innovation Portfolio; Doing the Right Projects, *Strategic Direction*, 23(3): 35.
- Quinn (1985). Managing Innovation: Controlled Chaos, *Harvard Business Review*, May-Jun, 73-84.
- Rapp, A., N. Schillewaert, and A. W. Hao (2008). The Influence of Market Orientation on E-Business Innovation and Performance: The Role of the Top Management Team, *Journal of Marketing Theory and Practice*.: Winter. 16(1): 7.
- Rhodes, D. and D. Stelter (2009). Seize Advantage in a Downturn, *Harvard Business Review*, Feb.
- Robbins, S. P. and T.A. Judge (2007). Organizational Behavior 12th Ed. New Jersey: Pearson Prentice Hall.
- Rosenthal, S.R. (1992). *Effective Product Design and Development: How to Cut Lead Time and Increase Customer Satisfaction*, Homewood, IL: Irwin Professional Publishing.
- Russell, R. K., and D. D. Tippett (2008). Critical Success Factors for the Fuzzy Front End of Innovation in the Medical Device Industry, *Engineering Management Journal*. Sep., 20(3): 36.
- Seers, A., M.M. Petty, and R.A. Guzzo (1995), Team-Member Exchange Under Team and Traditional Management: A Naturally Occurring Quasi-Experiment, *Group and Organization Management*, 20: 18- 38.
- Sethi, R., D.C. Smith, and C.W. Park (2001) Cross-Functional Product Development Teams, Creativity, and the Innovativeness of New Consumer Products, *Journal of Marketing Research*, 38(1).
- Sharkansky, I. and Y. Zalmanovitch (2000). Improvisation in public administration and policy making in Israel, *Public Administration Review*, 60(4): 321 – 329.
- Shepherd, C. and P.K. Ahmed (2000) NPD Frameworks: A Holistic Examination, *European Journal of Management*, 3(3).
- Susman, G.I., J.M. Ray (1999). Test of a Model of Organizational Contributors to Product Development Team Effectiveness, *Journal of Engineering and Technology Management*, 16.
- Terwiesch, C., and K. Ulrich (2008), Managing the Opportunity Portfolio, *Research Technology Management*. Sep/Oct., 51(5): 27.
- Thieme, R.J., X.M. Song, and G-C. Shin (2003) Project Management Characteristics and New Product Survival, *Journal of Product Innovation Management*, 20: 104 – 119.
- Trimble, C. (2009), Managing the Organizational Dynamics of Innovation in a Downturn, *Ivey Business Journal*, Jul/Aug.
- Trygg, L. (1993), Concurrent Engineering Practices in Selected Swedish Companies: A Movement or an Activity of the Few, *Journal of Product Innovation Management*, 10: 403 – 415.
- Wind, J., V. Mahajan (1997). Issues and Opportunities in New Product Development: An Introduction to the Special Issue, *Journal of Marketing Research*, 34: 1 – 12.

MARKETING IN THE BANKING INDUSTRY OF A DEVELOPING ECONOMY

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ABSTRACT

This paper is focused on the marketing strategies which are adopted by banks in Nigeria, with two banks serving as a case study. The major factor for the selection of First Bank of Nigeria, hitherto referred to as First Bank, and First City Monument Bank, hitherto referred to as FCMB, is that they represent two banking sects in Nigeria. Established over century ago, First Bank belongs to what is known as the old generation banks while FCMB, with a history of less than two decades, is regarded as a new generation bank. Taking into cognition the economic atmosphere of Nigeria, a developing country, the use of the marketing techniques as well as their effectiveness in reaching the desired customer/ consumer population is discussed. The factors that militate against customer-satisfying banking system and the overall effects are highlighted, leading to a conclusion of what can be done to steer the ship of the Nigerian banking system in a new direction.

INTRODUCTION

In the developing economy of which Nigeria is one as elsewhere, marketing practices are considered standard features of the packaged goods industry. However, their relevance in the service industry has been played down, as there has been a poor perception worldwide of the applicability of marketing techniques to the service industry.

It is clear that the topic of our discussion today is the most appropriate one for the world to know what effort has been put in place to take banking out of the woods in the developing world. The fact that banking belongs to the service sector underscores the need for an effective marketing network and as a player in the field of banking I have been involved both directly and remotely in the initial contact between clients and the organization.

Be that as it is, the need to give a practical effect to the marketing concept has become even more overwhelming in our marketing process; and it is what will keep any service industry going in the present era of our economy when focus is been shifted towards technological and physical development.

DEFINITION OF MARKETING

Simply put, marketing is buying and selling in the market place or filling a gap. Though quite precise, the limited scope of this definition faults its relevance to the topic of our discussion.

Indeed there are as many definitions of marketing as there are authors and as would be expected, each definitions seeks to establish some sort of superiority over others. Below are some of the definitions of marketing:

- American Marketing Association: The process of planning and executing the conception, pricing, promotion and distribution of ideas, goods and services to create exchange that satisfy individual and organizational objectives
- American Heritage Dictionary: The commercial functions involved in transferring goods from producer to consumer
- Merriam Webster's Marketing: An aggregate of functions involved in moving goods from producer to consumer
- Kotler and Armstrong (2001): A social and managerial process whereby individuals and groups obtain what they need and want through creating and exchanging products and value with others.

The irony of the situation is that these definitions emphasize basically the same principles. Rather than insisting on mere definitive semantics, therefore, a better and preferable approach is to examine the common bases of the various definitions.

Marketing Involves:

1. Identifying the most profitable markets now and in the future;
2. Assessing the present and future needs of customers;
3. Setting business development goals and making plans to meet them;
4. Managing the various services and promoting them to achieve the plan.

Three deductions are possible from the foregoing. The first is that the markets so identified must be profitable. The second is the recognition given to the consumer / customer as king (a back-up for the marketing concept) and finally, the implementation of action plans to achieve desired goals.

In designing and implementing the plan of action directed at satisfying consumer needs, marketing builds squarely on a mix of four otherwise referred to as the marketing mix or four P's of marketing:

- 1) Produce
- 2) Price

- 3) Promotion
- 4) Place.

To maximize the combination, the effects of marketing must be seen from two main perspectives: *micro* and *macro*. In an organizational context, the management represents the macro level where appropriate policies are formulated while individual operators directly involved in policy implementation form the micro segment. At this second level are branch managers, customer service officers, tellers, marketers, security, etc.

COMMERCIAL/UNIVERSAL BANKING

Commercial bank is the bank that offers a broad range of deposits accounts, including checking savings and time deposits and extends loans to individuals and business (Campbell R. Harvey, 2009). In recent time, the services of commercial and investment bank that were suppose to be in contrast are becoming more intertwined to be in the universal banking adoption by the commercial banks in the developing world.

WHAT IS SERVICE MARKETING?

To talk about banking alone in this era of Universal banking will amount to mistake and to have a proper look of the banking Industry is better refer to as financial services industry (universal banking). Financial services are those intangible but essentially identifiable offerings packaged by financial institutions to satisfy the needs of their customers.

Primarily, financial institutions include banks and non-bank financial houses like the insurance companies, provident fund, investment companies etc. Financial services marketing belong to a highly specialized realm of service marketing. Services are those separately identifiable, essentially intangible activities that are not necessarily tied to the sale of product or another service.

The special nature of services therefore derives from several distinctive characteristics which create special challenges, considerations and opportunities that often result in marketing programs that are substantially different from those found in goods marketing. These features include:

- (a) Intangibility
- (b) Inseparability
- (c) Heterogeneity

Intangibility of bank services derives from the basic reason that it is impossible for customers to sample i.e. taste, feel or smell the services before transacting business with banks in a developing nation like Nigeria but banks in the recent times are investing on technology.

Inseparability from the marketing stand point connotes that direct sale is the only possible channel of distribution but this is only one strategy and stage of development as technology is fast changing the phase and movement into a new era is in top gear.

Although heterogeneity constitutes a major feature of bank services in Nigeria, there, however, appears to be a reversal of the rule. Significant differentiation exists in levels of efficiency and consistency of quality of services rendered. Also some degree of differentiation is visible in recent times at the institutional level. For instance, there are banks that specialized in investment banking (FCMB), retail banking (First Bank) etc.

BANKING SERVICES

By bank services we mean those services provided at the point of delivery by banks through either their branches, area or head offices. Because of the limitations imposed by the nation's stage of technological development, these outlets remain the traditional channels of distributing bank services in Nigeria. All banks maintain sizeable number of branches to ensure a possible and further reach of their customer spread. For instance, First Bank has over 600 branches while FCMB has over 300 branches.

MARKETING FINANCIAL SERVICE (WHY AND HOW)

The peculiar feature of intangibility associated with financial services (which also includes banking services) attaches greater responsibility to the marketing of such services in the sense that unlike goods or tangible products, they cannot be smelt or felt. This explains the importance attached to consumer satisfaction in service marketing as the former remains the most appreciable barometer for measuring success in any service organization.

To appreciate the 'HOW' of financial services marketing, it will be necessary to recall the models earlier established viz: The perspectives of marketing management and the marketing mix.

Any good marketing plan is built around the marketing mix and, as was earlier indicated, the mix is a combination of variables which form the frame of any marketing program. The marketing mix consists of product, price promotion and place. Product represents a bundle of utilities which an organization offers for the satisfaction of its customer / consumers. Price is the amount (usually in money terms) for which a product is sold or purchased. Promotion consists of a combination of sales stimulating devices directed at communicating better with the consumer. Place, in other words referred to as the distribution point, is the final destination at which exchange is affected.

From the foregoing, the first three components of the mix apparently belong to the macro level of marketing management while the fourth component is within the domain of micro marketing management. However, some aspects of promotion also fall within micro marketing management. Management formulates the kind of the product it wishes to offer for sale. It sets the price (i.e. commission, interest etc.) and determines the promo-model. On the other hand, the field operator gives a personal effect to some components of the promo-model and finally delivers the service to the customers.

PROMOTION AND PROMOTIONAL STRATEGY

According to Carter McNamara (2008), promotion can be defined as ‘the effort to keep the product/services on the minds of the costumer and helps stimulate demand for the product’. The strategy of promotion includes the variables of an action plan geared towards achieving a particular objective. A major component of the marketing mix promotion is employed by banks to stimulate sales by directing persuasive communication to buyers. Where a company has to sell intangible products, the task becomes more enormous unless it adopts an effective and well balance strategy. An effective promotional program in any service oriented organization should focus on three major goals:

- a. Portray the advantages service in a pleasant and appealing manner
 - *Benefits*

- b. Emphasize the uniqueness of the service from those of competitors
 - *Features*

- c. Build a good corporate image and reputation
 - *Goodwill.*

Summarized, any worthy service organization must be able to confer benefits, feature and goodwill on its customers.

Various promotional tools for marketing bank services include advertising, sales promotion, publicity and personal selling. Personal selling is the oral presentation in a conversation with one or more prospective purchasers for the purchasers for the purpose of making sales. It is widely used in Nigeria due to its nature of contact with buyers who are widely spread (scattered) with little or no access to modern day (internet) banking facilities.

On the other hand, sales promotions consists of marketing activities other than personal selling, such as advertising and publicity, that stimulate consumer purchasing and dealer effectiveness. They include displays, shows, exhibitions, demonstrations, give-aways and other non-recurrent selling efforts outside the ordinary routing.

Advertising, according to McNamara (ibid), is 'bringing a product (or service) to the attention of potential and current costumers'. The banks in Nigeria are now employing the power of advertisement to market their products based on the ease of reaching a larger audience both near and far. For example, adverts are placed on both local and international media.

Publicity is the care attention either paid for or not but set to draw prospective customers to the features awareness of the product /services. Like any service organization, the bank applies a combination of these promo tools, but the intelligent use of a given combination strikes the difference and determines the level of impact such bank makes on a particular target audience.

Effective marketing of services, however, largely depends on the readiness and capability of the organization to meet competitive needs of the market place and the degree of efficiency, honesty and image display by the organization and its agents.

PLACE

One of the difficulties posed by tangible product marketing is its high cost profile resulting from physical distribution or placement of the goods. As established earlier, banking services are intangibles and clearly do not fall foul of this limitation.

What then is the problem with placing intangibles?

The greatest difficulty is possession utility. Possession utility can only arise after a potential customer has been privileged to encounter with the necessary product. In essence, until time and place utilities have been provided, possession utility remains invincible.

The emphasis on creating possession utility encourages aggressive banking rather than arm chair banking. Especially in our present era of technological advancement and severe competition, banking services ought to be carried to the customer with desirable courtesies. This is the surest bet for a necessary competitive edge that will ensure survival.

TOWARDS A NEW HORIZON

The aim of any marketing effort is to fill a gap. Filling a gap (present or potential) implies that a vacuum exists or may exist in the future. Our present day experience portrays a banking system that is burdened with a myriad of irregularities ranging from long queues and delays at bank counters to shoddy treatment of customers by bank workers. Other apparent irregularities include:

- Delays and inaccuracies of monthly statements of accounts;
- Delays caused by clearance of deposited checks as a result of the inability of branches to forward such checks on time;

- Setting of unreasonable deposit target.
- Sharp practice that does not conform to banking ethics.
- Lack of basic infrastructure for technological enhancement of operation

Additionally, the Nigerian banking system is in recent times implicated of corruption, leakage of confidential information, bad loans, inability to communicate effectively with customers and lack of adequate technology. While some of these shortcomings are institutional and may inevitably require the attention of the regulatory bodies, some can be effectively contained by individual efforts. These individual efforts again make the difference and to a great extent determine the various levels of success recorded by different banking institutions.

The role of public relations comes in handy in our search for a new horizon. Public relations as we know are deliberately planned and sustained effort to maintain a mutual relationship with customers. At the individual or micro level, mutual relation is a function of the personalities of banks' representatives and how these are brought to bear on customers.

Perhaps we should conclude by observing the very competitive nature of present day banking system. The panacea for survival is therefore in consistently monitoring the system in addition to evolving new strategies that will improve upon the inefficiencies of our competitors and gear towards western world banking.

REFERENCES

Houghton (2006) *'American Heritage Dictionary'* Boston: Houghton Mifflin Company

Kotler.P. &Armstrong. G. (2001) *'Principles and Practice of Marketing'*. London: McGraw Hill

Online Resources:

Carter McNamara KARANK (2008) Retrieved July 20, 2010, from <http://www.karank.com/business-1.htm>

Harvey Campbell INVESTOR CONCEPTS (11/2009) Retrieved July 20, 2010 from <http://>

Merriam-Webster Online Marketing Dictionary (n.d.) Retrieved July 29, 2010 from <http://www.merriam-webster.com/info/webteam>

LUCKY ROLLS, LEAPS OF FAITH AND HUNCHES: LUCK, FAITH AND INTUITION IN DECISION MAKING

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ABSTRACT

Organizational decisions often involve leaps of faith are based on the 'hunches' or intuition of decision makers. Frequently the most successful individuals and organizations are those that take a risk that pays off. Other successful individuals and organizations are more prone to using intuition, and are disproportionately lucky in having things work out well. However organizations use a variety of decision processes, some of which avoid leaps of faith and reliance on luck, and take a measured approach to minimizing risk.

In this paper we maintain that intuitive decision processes allow decision makers to avoid being overly risk averse and actually reduces risk by allowing tacit knowledge and implicit processes to positively influence both decisions and their implementation. We examine how luck and faith fit into models of decision making. Included are intuitive decision making and four other models - rational, behavioral, political and 'garbage can'. We conclude with suggestions of how luck, faith and intuition can be used for better decision making.

INTRODUCTION

Intuition, luck and faith are important but underexplored topics in decision making and management research. Magazine cover stories and television shows frequently showcase organizations that are successful due to the use of intuition, confidence in their decisions and lucky outcomes rather than using rational processes, proceeding cautiously and getting expected results. In reality all organizations need faith in their decision, rely on a degree of luck and use a variety of decision processes simultaneously. In this paper we maintain that intuitive decision processes allow decision makers to avoid being overly risk averse and actually reduces risk by allowing tacit knowledge and implicit processes to positively influence both decisions and their implementation. We further posit that luck and faith or confidence fits into intuitive decision making and other models of decision making.

First examine luck, faith and intuition are briefly examined, this is followed by a review of other models of decision making - rational, behavioral, political and 'garbage can'. The role of faith in the various decision making models is examined next. We conclude with suggestions for further research and how luck, faith and intuition can be used for better decision making.

LUCK

“I'm a great believer in luck and I find the harder I work, the more I have of it.” -
Thomas Jefferson

“Luck is the by-product of busting your fanny” - Don Sutton

Luck is a popular concept that not covered in management literature (Hafer & Gresham, 2008). Although difficult to define, luck is attributed to a situation that occurs against probabilistic expectations (Pritchard, 2005). Researchers have explored various types of luck, such as moral luck vs. epistemic luck (Hafer & Gresham, 2008). Moral luck is concerned with external circumstances and conditions - the consequences of actions a person's moral standing (Hafer & Gresham, 2008; Nagel, 1979). For example, if a morally questionable action results in little or no direct negative effect, the actor is considered lucky and the moral judgment is less severe than if there were dire consequences for the same action. Epistemic luck involves the gaining of knowledge through luck (Pritchard, 2004). For example, you suddenly have a breakthrough discovery in your series of experiments. You will be considered ‘lucky’ in the decisions that you made resulting in having and gaining knowledge (Hafer & Gresham, 2008). There are further divisions possible of different types of moral luck (Nagel, 1979) and epistemic luck (Pritchard, 2005); however the conceptual basis of all types of luck is in attribution theory (Hafer & Gresham, 2008). Luck is attributed when events and circumstances are unexpected or unanticipated. As such, innovation can seem to be the result of luck rather than judgment. (“Interpreting the future,” 2007), as can membership in dominant coalition (Pearce & Denisi, 1983).

Luck is not completely out of a decision maker’s control. Often decision makers often try to duplicate the luck of others by imitating what made them successful (Offerman & Schotter, 2009). Putting yourself in a position for luck to happen is the key. Knowing what is attainable and acting accordingly often results in lucky outcomes (MacLeod & Pingle, 2005).

FAITH

“In faith there is enough light for those who want to believe and enough shadows to blind those who don’t” - Blaise Pascal

“If men are given the grace to understand faith, they will comprehend it. If they aren’t, then faith will always be nothing but mere folly.” - Thomas Merton from The Seven Story Mountain

Faith is a word often associated with spirituality and religion, and workplace spirituality is associated with decision making (Fernando & Jackson, 2006). People want to integrate their faith and work (Naughton, 2006). Although some researchers separate faith based (spiritual) and secular (rational) approaches to problem solving (Shakun, 2006), others argue that trust in a secular framework is like faith in a religious organization (Caldwell, Davis & Devine, 2009). In this context perhaps confidence is a better term than faith.

Building capacity and confidence is a key principle in decision making process (Brooks & Hulme, 2007). Confidence (faith) comes with experience and learning (Moorcroft 2009), and trust and credibility create confidence (Sande, 2009). Is the faith in the person making the decision or the decision itself (Payne, Davis, Moore & Bell, 2009)? Both and neither. Faith in workers helps participation and acceptance of decision making (Wang, 2003). In this way the faith is in the decision. Self confidence allows entrepreneurs to be more innovative (Koellinger, 2008), with the faith in the decision maker. However faith has limits (Ye, 2008). Entrepreneurs have confidence in decision making, but overconfidence leads to failure (Hayward, Shepard & Griffin, 2006). Overconfidence results in overestimating abilities in situations with incomplete knowledge (Hyatt & Taylor, 2008).

INTUITIVE DECISION MAKING

Intuition is a commonly accepted decision approach (Glass, 2008) that has an important place in strategic decision making (Butler, 2002). As one management expert said "When it comes time for real decision making in complex topic areas, the other methods tend to fail us" (Glass, 2008). Intuition allows for quality decisions to be made quickly, to manage the trade-off between speed and decision quality (Dane & Pratt, 2007). In fact, gut instinct or intuition is used by experienced managers under duress despite the data and analytics at their disposal (Matzler, Bailom & Mooradian, 2007). Small business owners rely on intuition and being so involved in the daily operations allows patterns to be internalized facilitating the development of intuition (Isaack 1981).

Intuition may truncate steps present in rational models; however intuition and logical reasoning go hand in hand and rely on each other (Barnard, 1938). Explicit analytical thought and implicit intuitive thought are both useful and necessary (Pretz, 2008). Experts and experienced decision makers cannot explicitly explain their decisions, they unconsciously recognize and understand patterns, and in other words they have intuition (Simon, 1987). Jung recognized intuition and considered it as one of his personality types (Jung, 1926) later incorporated into the popular Myers-Briggs Personality Indicator (MBTI) as a dichotomy between intuitive and analytic types (Myers, McCauley, Quenk & Hammer, 1998). Barnard was referring to intuition when he spoke about 'non-logical processes' that were difficult to express in words but revealed themselves in actions and decisions. (Barnard 1938). About 50 years later Simon said "Intuition and good judgment are analyses frozen into habit" (Simon 1987).

DECISION MODELS - RATIONAL, BEHAVIORAL, POLITICAL, GARBAGE CAN

In addition to intuitive decision models, we will examine the relationship between luck, faith and decision making in four other dominant process perspectives on decision making. Models of decision making processes typically include various stages. To simplify our analysis we will consider three stages - problem definition, alternative generation and selection. a stage devoted to alternative generation. Each of these stages combines steps that exist in one or more of the models of decision making. For example, in some models problems definition requires an information gathering step or selection requires data analysis. The various models diverge early in the decision process, which changes the dynamics of the stages. For example, in some models there is a highly truncated search, and others require extensive scanning of the environment in search of alternatives or information from which alternatives are formed (Harrison & Pelletier, 2001). In this section we present a brief description of the five models, summarized in Table 1.

Decision Model	Problem Definition	Alternative Generation	Selection
Rational	Comprehensive analysis	Extensive search	Optimization
Behavioral	Focused Analysis	Problematic search	First adequate solution
Organized Anarchy	Spontaneous	Spontaneous	Serendipity
Political	Constraints and preferences	Restricted set	Sub-unit self interest
Intuition	Vague	Ad Hoc	Loosely defined

Rational Models

The rational model of decision making has strong advocates, primarily in economics (Zey, 1998). The rational model of decision making uses distinct steps in an orderly progression. 'Problem definition' or 'goal setting' immediately precedes alternative selection (Tarter & Hoy, 1998). The idea is that you must know what your goals or problems are before you can propose ways to reach or solve them. All alternatives that would solve the problem or lead to the goal being reached are uncovered or developed during the alternative generation step, through extensive scanning of the internal and external environment (Harrison & Pelletier, 2001). The step that follows alternative generation is some form of 'evaluation' which is followed by 'choice'. Alternatives must be evaluated as to their merits and then a choice can be made. Evaluation of alternatives involves calculating the 'utility' of each alternative. The utility of each alternative includes the various risks, costs and benefits associated with it (Jarret, 2000). It is assumed that the utility of each alternative can be measured and that adequate and appropriate methods of measuring utility can be established. Choice in a rational model may be combined

with implementation and evaluation because the alternative with the highest utility is automatically chosen.

Behavioral Models

Many researchers reject the rational model of decision making in favor of a behavior model (Halpern & Stern, 1998). Much like in the rational model, distinct steps in an orderly progression are present in behavioral models of decision making. The sequence and steps are roughly the same - 'problem definition' or 'goal setting', 'alternative generation' and 'evaluation' which is followed by 'choice'. The main differences between rational and behavioral models are the comprehensiveness of the processes (Cosgrave, 1996). In a behavioral model the analysis is far more focused. The problem is more narrowly defined with a goal of finding a satisfactory alternative, not the optimal one. Behavioral models assume that there is a set of criteria that describes minimally acceptable or satisfactory alternatives (March & Simon, 1958). Establishing these criteria takes place at the 'problem definition' or 'goal setting' stage. Alternative generation in behavioral models starts local and is historical, simplistic, and problem oriented. The 'evaluation' is on the basis of the criteria an alternative must satisfy and 'choice' is simple, the first alternative found to be minimally acceptable is chosen.

Political Models

Although political processes are considered to be independent of rational or behavioral processes (Dean & Sharfman, 1993), as in those previous models there are distinct stages in the decision process. The problem definition stage is more concerned with establishing constraints and preferences of those involved in and affected by the decision. Alternative generation come next, followed by the stage dealing with the gathering of information about the alternatives. (Pfeffer, 1981) The order of the stages in this model is viewed as an important part of a legitimate process. To violate the order of the process by conducting the stages in parallel would be "at once an invitation to conflict and is likely to be perceived as illegitimate and harmful to the organization's solidarity and the fundamental beliefs in organizational goals and organizational rationality." (Pfeffer, 1981. p121). In the political model the three stages - definition of constraints and preferences, alternative generation, and gathering of information about alternatives - all serve to reduce the number of and differences between possible alternatives. Choice is steered by constraints, preferences and the information gathered, and it is restricted to the alternatives generated. In the political model goals are heterogeneous and solutions are advocated on the basis of sub-unit self-interest. Involvement in the process that restricts the solutions offered allows you to influence the final decision.

'Garbage Can' Models

In contrast to the other models, in the organized anarchy (or 'garbage can') model alternative solutions exist and are developed and proposed independent of problems (Cohen, March & Olsen, 1972). . They are ideas that are found or developed by individuals within an organization or ideas brought in by individuals outside of the organization. These ideas are proposed as solutions. In an organized anarchy, the solution proposal process is on-going. Ideas are constantly being proposed or withdrawn as solutions. If an idea is withdrawn as a solution, it may be re-proposed by the same or another individual at a later time. Once proposed, solutions may initiate another generation process; it is the generation of a problem to fit the solution (Rommetveit, 1976). Neither problem generation, nor problem-solution fit is necessary however, the organized anarchy model allows for a decision to adopt a solution that 'found' an existing problem that it does not solve.

Table 2: Role of Luck in Each Stage of Five Decision Making Models

Decision Model	Problem Definition	Alternative Generation	Selection
Rational	Right criteria	Generated right alt. set	Correct analysis
Behavioral	Right focus	Looked in right places	First alt was good
Organized Anarchy	Right problem surfaced	Right solution surfaced	Right match
Political	Right limits	Exclusion of wrong alt	Support of others
Intuition	Right insights	Found good alternatives	Right insight

Table 3: Role of Faith in Each Stage of Five Decision Making Models

Decision Model	Problem Definition	Alternative Generation	Selection
Rational	Appropriate process	Solutions will be found	Optimal solution is recognized
Behavioral	Appropriate limits	Minimum criteria can be met	Good enough is good enough
Organized Anarchy	Problems will surface	Solutions will surface	Match can happen
Political	Limits help	Bad alts not included	Friends come through
Intuition	Proper understanding	Know or can find solutions	Good instincts

LUCK, FAITH AND DECISION MODELS

Confidence or Faith can facilitate each stage (Table 2) and attributions of luck can be made in each stage (Table 2) whenever the decision maker got something 'right' in the decision models considered. At the problem definition stage, faith in the appropriateness of the process is important in the rational model, and the decision maker is lucky if the right criteria are used. Faith in the right limits is the key in the behavioral model because the process is truncated. The decision maker is lucky if the problem is framed appropriately and the focus is correct. Anarchy models rely on a match between problem and solution, therefore it is lucky if the right problem surfaces, and the decision maker must believe that problems in need of solutions will surface. In political models the key belief is that the limits set in the problem definition will ultimately guide the process and lead to a favorable selection. It is lucky to set the right constraints that shift decisions in the favor of the decision maker and those allies seeking power. For intuition to work the decision maker must have faith in the understanding of the problem. If the insights are correct, if the decision maker is lucky.

In the rational model many alternatives are generated, therefore confidence that a solution can be found is necessary and the lucky outcome is the right set of outcomes. The behavioral approach uses a 'problematic search' and depends on the minimum criteria being met so to be lucky means that the search was made in the right place to find such solutions. Faith that the right solutions that match the problems will surface allows the organized anarchy model to proceed. Like in the earlier stage it is lucky to have the right solution surface. In a political model it is lucky if alternatives that would favor opponents are avoided and never considered. That would maintain the confidence of key players and ultimately prevent decisions that are not favorable. Intuition can only work if the decision maker is confident that a solution is known or will be found, and it is lucky if good alternative solutions occur to the decision maker.

Confidence in the selection in a rational process means that the decision maker is confident that the optimal solution will be recognized as such, and is lucky if the analytical methods and procedures are correct. The behavioral decision maker that is selecting a 'good enough' solution must be confident that good enough is indeed good enough, and lucky if the first one turns out to be adequate. If the decision maker is confident that a lucky match can spontaneously happen, then the organized anarchy process will be trusted. A political selection process requires confidence that the selection will be supported by others with influence on the process. A lucky decision maker will get the support of others in selecting the preferred alternative. Finally, faith in the decision maker's instincts leads to faith in the intuitive selection process. The right selection means that the decision maker was lucky in having the right insights.

CONCLUSIONS AND SUGGESTIONS FOR FURTHER RESEARCH

Faith in people and processes, attributions of luck and intuitive processes all are influential phenomenon in organizational decision making, but have not received significant attention in decision making research. In this paper, the relationship between faith and luck in five decision models - rational, behavioral, organized anarchy, political and intuitive - were examined. For luck the most likely attribution of luck was identified for each stage of each model. Regarding faith, the key aspects where faith or confidence would facilitate each stage of each model was identified.

Managers can use awareness of these attributions and facilitating factors to control the decision making processes within the organization and sense making processes both inside and outside of the organization. The processes can be controlled internally by considering what elements key players need to have faith or confidence in to keep the decision process running smoothly. Anticipating and controlling attributions of luck can be used to establish credibility, avoid the appearance that success is due to chance, be sure that key elements of effective decisions are identified and responsible parties are given appropriate credit.

This examination is a first step in creating a more complete view of the decision making process. Each combination of stage, decision model and luck/faith deserves greater theoretical attention and empirical investigation. Each stage of each model and its relationship with luck and faith can be examined individually or investigated by decision model, stage or some other grouping. Academics can also use the analytical framework presented in this paper to guide lectures on decision making, faith, luck and intuition. Addressing such interesting but under-investigated current topics in the class room allows our students to augment the mature bodies of knowledge that they are accustomed to encountering in class by considering new and relevant issues as they are being addressed by the field.

REFERENCES

- Barnard, C.I. (1938). *The functions of the executive*. Cambridge, MA: Harvard University Press.
- Brooks, W., & K. Hulme (2007). Five key principles that guarantee business results. *Training & Management Development Methods*, 21(2), 223.
- Butler R. 2002. Decision making. In Sorge A. (Ed.), *Organization* (pp.224-251). London: Thomson Learning.
- Caldwell, C., B. Davis & J. Devine (2009). Trust, faith, and betrayal: Insights from management for the wise believer. *Journal of Business Ethics*, 84, 103.
- Cohen, M.D., J.G. March & J.P. Olsen (1972). A garbage can model of organizational choice. *Administrative Science Quarterly*, 17(1), 1-25.

-
- Cosgrave, J. (1996). Decision making in emergencies. *Disaster Prevention and Management*, 5(4), 28.
- Dane E. & M.G. Pratt (2007). Exploring intuition and its role in managerial decision making. *Academy of Management Review*, 32(1), 48
- Dean J.W. & M.P. Sharfman (1993). Procedural rationality in the strategic decision-making process. *Journal of Management Studies* 30(4), 587–610.
- Fernando, M., & B. Jackson (2006). The influence of religion-based workplace spirituality on business leaders' decision-making: An inter-faith study. *Journal of Management and Organization*, 12(1), 23.
- Glass, R. (2008). Intuition's role in decision making. *IEEE Software*, 25(1), 96.
- Hafer, J., & G. Gresham (2008). Luck's role in business success: Why it's too important to leave to chance. *Journal of Behavioral and Applied Management*, 9(3), 295.
- Halpern, J.J. & R.N. Stern (1998). *Debating rationality. non-rational aspects of organizational decision-making*. New York, NY: Cornell University Press.
- Harrison, E.F., & M.A. Pelletier (2001). Revisiting strategic decision success. *Management Decision*, 39(3), 169.
- Hayward, M.L.A., D.A. Shepherd, & D. Griffin (2006). A hubris theory of entrepreneurship. *Management Science*, 52(2), 160.
- Hyatt, T., & M. Taylor (2008). The effects of incomplete personal capability knowledge and overconfidence on employment contract selection. *Behavioral Research in Accounting*, 20(2), 37.
- Interpreting the future.(2009). *Strategic Direction*, 25(2), 9.
- Isaack, T.S. (1981). Intuition: Needed in managing the small business! *Journal of Small Business Management (Pre-1986)*, 19(2), 74.
- Jarrett, E.L., 2000. The role of risk in business decision-making, or how to stop worrying and love bombs. *Research Technology Management*, 6, 44.
- Jung, C. (1926). *Psychological types* (H. G. Baynes, Trans). London: Routledge & Kegan Paul.
- Koellinger, P. (2008). Why are some entrepreneurs more innovative than others? *Small Business Economics*, 31(1), 21.
- MacLeod, W.B., & M. Pingle (2005). Aspiration uncertainty: Its impact on decision performance and process. *Journal of Economic Behavior & Organization*, 56(4), 617.
- March, J.G. & Simon, H.A. (1958), *Organizations*, New York: John Wiley & Sons

- Matzler, K., F. Bailom, & T.A. Mooradian (2007). Intuitive decision making. *MIT Sloan Management Review*, 49(1), 13.
- Moorcroft, R. (2009). Learning growing gaining confidence. *The British Journal of Administrative Management*, Winter, 12.
- Myers I.B., M.H McCauley, N.L. Quenk, & A.L Hammer (1998). *MBTI manual: A Guide to the development and use of the Myers-Briggs Type indicator 3rd edition*. Melbourne: ACER Press/Consulting Psychologists Press.
- Nagel, T.: 1979, 'Moral luck', in *Mortal Questions* (pp. 24–38), New York: Cambridge University Press.
- Naughton, M. (2006). Panel two: Managing as if faith matters. *Fordham Journal of Corporate & Financial Law*, 11(3), 597.
- Offerman, T., & A. Schotter (2009). Imitation and luck: An experimental study on social sampling. *Games and Economic Behavior*, 65(2), 461.
- Payne, G., J. Davis, C. Moore & R. Bell (2009). The deal structuring stage of the venture capitalist decision-making process: Exploring confidence and control. *Journal of Small Business Management*, 47(2), 154.
- Pearce, J.A.,II, & A.S. DeNisi, (1983). Attribution theory and strategic decision making: An application to coalition formation. *Academy of Management Journal*, 26(1), 119.
- Pfeffer, J. (1981). *Power in organizations*. Marshfield, MA: Pitman.
- Pretz, J. (2008). Intuition versus analysis: Strategy and experience in complex everyday problem solving. *Memory & Cognition*, 36(3), 554.
- Pritchard, D. (2004). Epistemic luck. *Journal of Philosophical Research*, 29, 193-222.
- Pritchard, D. (2005). *Epistemic luck*, Oxford: Oxford University Press.
- Rommtveit, (1976) Decision Making under changing norms in J.C. March & J.P. Olsen (eds) *Ambiguity and Choice in Organizations* (pp 140-155). Berlin: Universitetsforlaget.
- Sande, T. (2009). Taking charge of change with confidence. *Strategic Communication Management*, 13(1), 28.
- Shakun, M.F. (2006). Spiritual rationality: Integrating faith-based and secular-based problem solving and negotiation as systems design for right action. *Group Decision and Negotiation*, 15(1), 1.
- Simon, H.A. (1987). Making management decisions: The role of intuition and emotion. *The Academy of Management Executive*, 1(1), 57.
- Tarter, C.J., & W.K. Hoy, (1998). Toward a contingency theory of decision making. *Journal of Educational Administration*, 36(3), 212.

Wang, Y. (2003). Trust and decision-making styles in Chinese township-village enterprises. *Journal of Managerial Psychology*, 18(6), 541.

Ye, B. (2008). Managerial overconfidence and corporate investment: Evidence from P. R. China. *Journal of American Academy of Business, Cambridge*, 13(1), 246.

Zey, Mary. 1998. *Rational choice theory and organizational theory: A critique*. Thousand oak s, CA: Sage.

