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An empirical study of Hong Kong Christians
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香港基督徒個案的實證研究

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ABSTRACT

By conducting a survey with a sample size of 767 Christians in Hong Kong, we measure the level of obedience and the level of struggle of the respondents upon making ethical work place decisions. Based on our measures, we then apply the multinomial logistic regression method to examine the likelihood of individual values, church factor, work ethical viewpoint, social background, faith orientation, family relationship and past experience…etc affecting both judgmental behaviors and internal struggles. We find that (1) males struggle less than females when making decisions. (2) The more "result-oriented" a Christian is, the more likely it will obey and follow management's decisions. (3) The larger or the more rigorous their work place, the easier is it for the Christians to obey and follow management's decisions. (4) The longer devotion time a Christian has, or the more history/social science books a Christian reads, the more unlikely a Christian disobey its own wish. (5)The more short-term missions or visitations performed by the Christian, the lower the struggle index.

1.0 INTRODUCTION

Employers expect their employees to perform work perfectly as assigned[2]. There are job descriptions and guidelines across different positions in different industries. Employees, however, may fail to cooperate. One of the most studied reasons is the principal-agent problem[3]. Studies on this "fail to cooperate" behavior tend to ignore its spiritual aspects. Calkin (2000) argues the lack of religious traditions applying on Business ethical studies may have eliminated the potential contribution of religious perspective. Besides, Herman (2001) gathered articles written by scholars across many religious traditions in his book "*Spiritual Goods: Faith Tradition and the Practice of Business*", explained how Buddhism, Judaism, Islam, Mormonism and a number of Christian traditions intersect with the practices of business. There have been increasing voices on the urge to explore scholar researches in the spiritual perspective, especially in studies about ethical behaviors. The present paper echoes their argument and empirically analyzes how religion, namely Christianity, affects workmanship judgmental behaviors.

The present paper defines judgmental behaviors as actions chosen under not only rational, but also careful considerations in work places. In other words, we look at situations where workers have enough time and freedom to judge and select their behaviors. They make conscious choices, but they may struggle in this decision-making process. They may struggle a lot because the judgmental behavior they made may not be consistent with their personal beliefs. Or, on the other hand, they may be able to separate their faith and their work enough that they do not struggle at all. It is our intention to look at how faith affects contemporary work place decisions.

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[2] According to the Washington State Department of Personnel Government Civil Service Rule WAC 357-37-025, the employee has the responsibility to: (1) Request clarification of any job duty, standard, or expectation that is unclear; (2) Perform work as assigned and meet job standards and expectations; (3) Participate in the performance evaluation process; and (4) Communicate with supervisor and share successes and problems so the supervisor can better measure progress and provide assistance.

[3] For complete review on principal agent problems, see: Sappington (1991)

We want to look at Christians for a particular reason. On one hand, the teachings of Christianity promote faithful obedience for servants to serve their masters[4]. Hence, Christians can be expected to be loyal and accountable under most everyday situations. This implies a positive influence on performance from faith. On the other hand, however, the teachings of Christianity also indicate clearly that Christians should be holy because their God is holy[5]. In other words, if management's decisions are not consistent with the holy teachings, Christians should not submit to their decisions and reject the assigned works. Therefore, should faith plays any significant roles in decision-makings, Christians are expected to reject the assignment and be loyal to their God, but not their bosses. However, our empirical result does not indicate this expected result.   Most of our survey participants will in fact follow their boss's decisions even though those decisions may interfere the basic teachings of their faith. However, these judgmental behaviors may come with internal struggles. One major contribution of the present article is to quantify internal struggles with respect to their chosen behaviors.

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[4] See: http://www.allaboutgod.com/workplace-ethics.htm "Each person is given a responsibility and we are to be "faithful" in that trust. The word "faithful" is translated from the Greek word "pistis" and it means to be steadfast to one's word or promises, worthy to be believed, trustworthy, and having dependable speech. It is very interesting that we find this same word used to depict the faithfulness of God. "Faithful is He that calleth you, who also will do it" (1 Thessalonians 5:24, KJV). This same word is used for the character of God and it therefore should be seen in those who are His children. The conclusion is that the basis for workplace ethics is that those in the workplace, both employer and employee, should see their lives as being a steward who is responsible to govern their actions by the viewpoint and the model of God's faithfulness. The other principle is found in a passage in Ephesians. "Slaves, obey your earthly masters with respect and fear, and with sincerity of heart, just as you would obey Christ. Obey them not only to win their favor when their eye is on you, but like slaves of Christ, doing the will of God from your heart. Serve wholeheartedly, as if you were serving the Lord, not men, because you know that the Lord will reward everyone for whatever good he does, whether he is slave or free. And masters, treat your slaves in the same way. Do not threaten them, since you know that he who is both their Master and yours is in heaven, and there is no favoritism with him" (Ephesians 6:5-9, NIV)."

[5] "No man can serve two masters: for either he will hate the one, and love the other; or else he will hold to the one, and despise the other. Ye cannot serve God and mammon." (Matthew 6:24, KJV); "Because it is written, Be ye holy; for I am holy." (I Peter 1:16). In Christian's teachings, Christians need to prioritize God. God's way is always the preferred way. Since God is holy, unethical management decisions are not to be followed. A practical example can be found at Midwife's story in the book of Exodus 1:17.

Besides, Christian teachings are subjective. The decision-making process of Christians may even be more complicated under not-so-clear or "grey" areas. This is not the intention of this paper to discuss if "grey" areas exists or not, we define "grey" areas as loopholes that the Christian bible may not have clearly stated[6] and teachings that maybe slightly different across different Christian denominations[7]. It may be interesting to see if Christians are more obedient to their bosses these "grey" areas. We therefore, conduct a survey on Christians in Hong Kong[8], from which we measure the level of obedience and the level of struggle of the respondents upon making ethical work place decisions. Based on our measures, we then apply the multinomial logistic regression method to examine the likelihood of individual values, church factor, work ethical viewpoint, social background, faith orientation, family relationship and past experience…etc affecting both judgmental behaviors and internal struggles.

The organization of the remainder of this paper is as follows: Section 2 reviews existing literatures on related topics; Section 3 presents our method of analysis and the descriptive summaries; Section 4 discusses our findings and suggests practical ways to improve the current situation; and Section 5 concludes our work and proposes possible future research directions.

2.0 LITERATURE REVIEW

The literature on work place spirituality has exploded after 2000[9]. Gibbons (2000) gives a thorough discussion on the possible meanings of work place spirituality. However, Fernado and Jackson (2006) point out

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[6] For example, Christians may remain silence when not being asked.

[7] Certain denominations do not allow drinking alcohols, but some do.

[8] We study Christians in Hong Kong because, unlike the North America and European culture, most Christians in Hong Kong are not raised by Christian families. This implies our sample can minimized the impacts from religious tradition and focus on the impacts from religious faith toward work place ethics.

[9] For example: Giacalone and Jurkiewicz (2003, 2004); Delbecq(2000); Cavanagh and Bandsuch(2002); Brown(2003); Krahnke, Giacalone and Jurkiewicz (2003), …

that there is no widely accepted definition. One group of researchers argues, " *that spirituality can be identified and defined independently of any religious context. They argue that spirituality is not confined to religion. It can also be a sense of purpose, meaning and connectedness to one another…another group of commentators tie spirituality with religion. They specifically link the definition of spirituality with religious practice[10]."* The current paper takes the later definition of work place spirituality.

Empirical measurement on ethical decisions is widely studied. Ford and Richardson (1994) and Loe, Ferrell, Mansfield (2000) provides an excellent review on the empirical literature. There are two types of traditional measuring variables: personal specific variables and situation specific variables. Personal specific variables include: nationality, religion, sex, age, education, employment, and personality. Situation specific variables include referent groups, rewards and sanctions, codes of conduct, type of ethical conflict, organization effects, industry, and business competitiveness. In additional to that, O'Fallon and Butterfield(2005) reviews the 140 empirical ethical decision-making literature from 1996-2003 in the top business journals.

Longenecker, McKiney and Moore (2004) empirically estimate the relationship between religious commitment and business ethics. They study 1,234 business leaders in US based on the acceptability of 16 business ethical questions. In their study, they find little relationship between religious commitment and ethical judgments. Fernando and Jackson (2006), however, look at thirteen Sri Lankan business leaders and conclude otherwise. Their studies suggest that religion plays a significant role in influencing the judgment, emotional and motivational qualities of Sri Lankan Leaders' decision making. These two studies look at different faith categories, but our focus is on Christianity. We argue that different religion may have rather different teachings. Since we want to examine the effect on the clarity aspect of teaching on judgment behavior, looking at different religions at the same time will not help. Besides, we

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[10] See Fernando and Jackson (2006), P. 24

would like to explore more of a "depth" aspect rather than "breadth" aspect of the studies. We want to measure the degree of internal struggle that is induced by the person's faith.

Ralston et al (1997) studies the convergences of manager value across four different cultures. Their study confirms the role of national culture have impacts on work values. As mentioned earlier, Hong Kong has a distinctive culture. Most Christians are not raised up by Christian Families. About 5% of the population in Hong Kong is Christians; they are usually minorities in their work places. McDonald and Kan (1997) look at business ethical behaviors of Hong Kong in a more general perspective. They find out that older employees are less likely to perform unethical behavior than younger employees. There are no statistical differences in ethic beliefs in relation to gender, company size, company type or level in the organization. In their sample, they point out the ethical decisions are not affected by level of education, religious beliefs, years of experience, and functional origin in Hong Kong. Our study echoes most of these findings. Besides, we look further into the degree of struggles of Christians upon making unethical decisions. Some of these variables, however, are statistically significant.

Niebuhr (1951) defines five different types of responding strategies against culture: Christ against culture, Christ of culture, Christ above culture, Christ and Culture in paradox, and Christ the transformer of culture. The most extremes are Christ against Culture and Christ of culture. Siker (1989) extends Nieburhr's framework by narrowing down the five strategies into the five types: Christ against business, Christ of business, Christ above business, Christ and business in paradox, and Christ the transformer of business. Lewicki et al (2001) proposed another way to identify Christian types based on their negotiation styles: Yielding, Avoiding, Compromising, Integrating and Dominating. Lee, McCann and Ching(2003) incubate Lewicki's analysis with Niebuhr's model and proposed a new typological framework. Finally, Chan and Lee (forthcoming) defines another classification of Christian types based on behaviors and internal struggles. However, there is a lack of literature that we can find on how to measure internal struggles. In this paper, we develop a binary struggling index to quantify this abstract concept. Our

method will be discussed in details in the next section. This paper uses the multinomial logistic regression model to analyze our data.

3.0 METHOD

3.1 Data Collection

The analysis of this study is based on primary data. We formed a team of about 10 members to set up a questionnaire. The members include experts in ethical study, businessmen, managers and mid-level executives etc; some of them have received theological education. The proposed questionnaire has been sent to various Christians for comments and was pre-tested with 30 Christians in Hong Kong. The refined questionnaire is used for a comprehensive survey, funded by Hong Kong Professional Service organization (HKPES), was conducted between June and December of 2003, We randomly selected 500 local Christian churches in Hong Kong by systemic sampling and 41 of them agreed to participate in this study. We also invited four other Christian organizations to participate in this project. At the end, we had 41 churches and 4 Christian organizations participating and we sent out a total of 1,890 questionnaires to them by mail and or by hand-delivered by HKPES staffs. Finally, we received 767 completed questionnaires from these 40 churches and 4 Christianity organizations. The response rate is 40.58%. Most of the participants are 30-45 years old Christians who work in the management level. We observed that most of the participants completed the questionnaire prudently. We received feedbacks from the participants that they questionnaire made them think much on their faith. Indeed, the Cronbach α test[11] reveals that the data we collected is credible statistically.

There are four parts in our questionnaire[12]. Part I briefly explains the purpose of the questionnaire and assured the participants of the issue of confidentiality. This increases the creditability of the collected data. Part II presents three cases under three different working environments. The

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[11] The α of this data equals 0.832   with a significant F-value (p<.05).

[12] The questionnaire is attached in Appendix 1.

details will be given in section 3 of this paper. Part III involves 18 questions based on values and 5 based on works. These are all likert scaled questions. Part IV contains 34 questions concerning participants' demographic background, faith habits and personal experiences.

3.2 Classifying Judgment behaviors

Our questionnaire consists of three virtual work place scenarios asking participants what their responses would be. In 2003, the government of Hong Kong legalized soccer gambling. It was a current, controversial topic when the questionnaire was carried out. We therefore ask the participants to play the role of a civil servant who is asked to take on a job as the facilitator of this legalization project. From now onwards, we call it the "soccer gambling" case. Most evangelistic Church's teaching is against gambling[13]. In this case, the participant will need to stand out in public and defend the government's decision on legalization of gambling. This implies that the participants know that everyone in their church will eventually know what they have chosen. This may result in extra pastoral care or criticisms if they decide to take on the job. We want to know if the ability to "hide" will affect work place ethics among Christians.

In another situation, we ask the participants to play a role of an internal inspection officer. Because of a critical error made by their be-loving supervisor, the company lost a crucial business opportunity. The participants are asked to be in charged of this internal inspection committee and they discover that their immediate supervisor made that inexcusable error. To complicate the issue, they are told that this supervisor has been extremely supportive and helpful. Besides, this supervisor is the only financial provider of his own family. We call this second situation the "Supervisor Error" case. Under this situation, the Christian teaching alone is controversial. On one hand, Christians are supposed not to lie as mentioned later. On the other hand, Christians are

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[13] One of the major arguments is: God presents work as the normal way to get the money we need (Eph 4:28; II Thess. 3:12; Prov. 31). When a person cannot work, the second choice is prayer (Phil. 4:6, 19).

supposed to care for the needy and forgive[14]. We want to explore the situation how judgmental behaviors are determined when the bible teachings are not clear. Hence, we can estimate the relative effect of Church teachings on work place decisions.

Besides, we ask the participants to play the role of an account officer. From now on, we call this scenario the "Account officer" case. The participants were ordered by their supervisors to lie about the current financial situation of the company so as to attain a longer credit period from their supplier. It is against the Christian teaching to lie[15]. Therefore, it creates a dilemma for Christian workers. Through this confidential questionnaire, we want to seek how Christian workers balance their faith and orders from their bosses. In order to minimize the chances of systematic carryover biases, our questionnaires are broken into three different subgroups by three different orderings of the cases.

We believe that individual judgmental behaviors can be quantified by two distinct observations. The first one measures behavioral decisions, meaning the ultimate behaviors of the participants. The second one measures the degree of difficulties towards making such behavioral decisions.

In this questionnaire, we asked the participants on: (1) whether to accept the decision made by their management level; (2) the degree of difficulties of making such decision. We imposed two measuring indexes: Obedience index and Struggling index. The obedience index is a quantitative measure of how closely the participants obey their orders. Struggling index is a quantitative measure on the level of difficulty of making such decisions.

"Obedience index" is constructed from the section of "Scenario Analysis"

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[14] See: 1 Peter 4:8-9, "*But the end of all things is at hand: be ye therefore sober, and watch unto prayer. And above all things have fervent charity among yourselves: for charity shall cover the multitude of sins*", and 1 Corinthians 4:7, "*Beareth all things, believeth all things, hopeth all things, endureth all things.*"

[15] See: Matthew 5:37, "*But let your communication be, Yea, yea; Nay, nay: for whatsoever is more than these cometh of evil.*"

in the questionnaire. The higher the score, the stronger the participants will obey to their management level. In manipulating the index, the answer of "Definitely" is assigned 30 scores, "Probably" is 20, "Probably not" is 10 and "Definitely not" is zero. As the scenario of "Supervisor Inexcusable Error" is a reverse case of following the management's decision, the scores assigned are all way round in this case. "Definitely" is scored zero, "Probably" is 10, "Probably not" is 20 and "Definitely not" is 30. Total score of the three cases is 90 at highest and 0 at lowest. Score below 50 is classified as "weak level" to obey their management level because this implies the respondents at least in two cases choose "Probably not" or one case to choose "Definitely not" among the three virtual work place scenarios whereas above 50 are classified as "strong level" implying that respondents at least in two cases choose "Probably" or in one case choose "Definitely" among the three virtual work place scenarios

"Struggle index" is a quantitative measure on the level of difficulty in making decision in the three virtual work place scenarios. High score implies respondents struggle a lot in their decision process. In manipulation, the answer of "Very hard" is scored 40, "Hard" is 30, "Average" is 20, "Easy" is 10 and "Very easy" is zero. Total scores of the three cases lie between 0 and 120. Score below 50 is classified as "weak level of struggle" to make decision because this implies respondents at least in two cases choose "Average", "Easy" or in one case choose "Very easy" among the three virtual work place scenarios. Above 50 is classified as "strong level" implying respondents at least in two cases choose "Hard" or in one case choose "Very hard" among the three scenarios.

Using these two indexes, we further classify work place Christians into four different types: Type 1 and Type 2 Christians are Christians who is likely to be submissive to their company's ethical decisions (high level of obedience). Type 1 Christians follow with a high level of struggles while Type 2 Christians follow with a low level of struggles. Type 3 and Type 4 Christians chose not to follow their company's ethical decisions (low level of obedience). Type 3 Christians made that decision with a high level of struggles while Type 4 Christians do not. (See Table 1)

Table 1
Classification of Christians

		Struggling Index	
		Strong	Weak
Obedient t Index	Strong	Christian Type I	Christian Type II
	Weak	Christian Type III	Christian Type IV

3.3 The current Hong Kong Christian work place judgmental behavior situation

Appling the above classification of Christians in our data set, we found that 30.0% of the participants are Type I Christians, 28.5% are Type II Christians, 23.9% are Type II Christians and 17.6% are Type IV Christians (See Table 2).

Table 2
Hong Kong Christian classifications (Total Sample = 767)

		Struggling Index	
		Strong	Weak
Obedient t Index	Strong	Christian Type I N=198 (30.0 %)	Christian Type II N=188 (28.5 %)
	Weak	Christian Type III N=158 (23.9 %)	Christian Type IV N=116 (17.6%)

Most of our respondents are Type I Christians. They have strong obedience level meaning that they will follow the management's decision at the end, but they also have strong struggle level. In their decision process, they struggle a lot. The number of type II Christians is not far behind. They will obey the decision made by the management and follow without an intense level of struggling. The overall sum of these two types is 58.5%. This indicates close to 60% of Hong Kong Christians will likely obey their managements' decisions even though they may struggle

through such decision process. This is one of the important observations we see in our study.

Observation 1:
Most Hong Kong Christians will likely obey their managements' decisions in ethical dilemmas.

Besides, 23.9% of them are Type III Christians. They have struggles, but at the end decide not to obey fully to their management in these critical situations. Combined with Type I Christians, our results indicate that 53.9% of Christians experience strong level of struggles on work place ethnical issues. This is our second observation.

Observation 2:
Most Hong Kong Christians experience strong level of struggles when making ethical decisions in their work places.

The obedience index and the struggling index differ a lot across each case. According to our data, in the account officer case, 75% of the participants will obey the order of their boss while 25% of the participants will not. 44.2% of the participants struggle when making such decision. In the case of soccer gambling, 61.4% of the participants refused to take up such appointment and 38.6% will follow the order. 55.9% of the participants will struggle when making this decision. Lastly, in the case of supervisor error, 59.6% of the respondents will not hide the facts whereas 40.4% of them will. 66.9% of the respondents find it difficult to make this decision. (See table 3)

Table 3
Responses under each case

Case	Obey	Disobey	Difficult	Easy
Account Officer	75.0%	25.0%	44.2%	16.7%
Soccer Gambling	38.6%	61.4%	55.9%	12.9%
Supervisor Error	59.6%	40.4%	66.9%	8.1%

Christians are most likely to obey their bosses under the account officer case and least likely to obey in the soccer gambling case. This indicates another important observation: Christians are less likely to follow management's decision in cases where biblical teachings are more clear-cut. In other words, for issues that have clear-cut religious standpoints, Christians tend to select according to the teachings of church and religious leaders (like in the case of "Soccer gambling"). This implies for issues that lack clear-cut doctrinal standpoints, Christians tend to obey their companies' management decisions (like in the case of "supervisor error").

Observation 3:
For ethical issues that have clear-cut religious standpoints, Christians tend to select according to the teachings of church and religious leaders.

Their decision-making process is the easiest in the account office case and the hardest in the supervisor error case. The supervisor error case is the case where the Christian teaching alone is controversial. This implies the more controversial the Christian teaching on that ethical issue, the more struggling Christians have upon making decisions.

Observation 4:
For issues that lack clear-cut religious standpoints, Christians tend to struggle more upon making ethical decisions.

The cases of account officer and supervisor inexcusable error are comparatively common in reality. Our finding reflects a significant portion of Christians struggle in their work place decision-makings and this is a problem is worthwhile to explore. What are the factors that make certain Christians type I, but not type-II, III or IV? This is the main discussion theme of this present paper.

3.4   Model

We first take the four types of Christians mentioned above to be our dependent (explained) variable. The explanatory variables are individual values, work ethical viewpoint, social background, faith orientation, family

relationship, past experience, the church factor, and so on. Since the dependent variable is a categorical variable, we cannot use the common ordinary least square method to run our regression. Therefore, we apply the multinomial logistic regression methods to perform our regression. The logit model we are applying has the following formula:

$$\log\left(\frac{\pi_i^{(s)}}{\pi_i^{(j)}}\right) = \alpha^s + \sum_{k=1}^{K} \beta_k^{(s)} X_k \quad \text{s} = 1, \ldots \ldots j\text{-}1 \quad (1)$$

s, j = (type I, II, III, III and type IV Christians)

X_k : The explanatory variables: like individual values, the church factor, work ethical viewpoint, social background, faith orientation, family relationship, past experience, and so on.

$\pi_i^{(s)}$: Probability of respondent i being type s Christian

$\pi_i^{(j)}$: Probability of respondent i being type j Christian

α^s : Intercept for s type Christians

$\beta_k^{(s)}$: Slope parameter with respect to k variable, which interpreted as the additive effect of a 1-unit increase in X_k on the log-odds of being type s Christian rather than being type j Christian

From the above formula, we can determine the relative probability (in logarithm) of Christian type under certain specified explanatory variables. For instance, we can estimate the relative probability of Christian types for different genders (X_k).

3.5 Explanatory Variables

As there are 18 statements and 7 statements related individual values and the church factor respectively, it is not appropriate to contain all variables in a model, or else the model will be overflow. Instead, factor analysis method is employed. Factor analysis attempts to identify underlying variables, or factors, that explain the pattern of correlation within a set of observed variables. The main application of the factor analytic techniques is to identify a small number of factors that explain most of the variance observed in a much larger number of manifest variables, and is used to screen variables for subsequent analysis.

Therefore, this method can reduce the number of explanatory variables employed in regression analysis, i.e., increase the degrees of freedom and lower the degree of multicollinearity. These result in smaller standard errors of the estimated coefficients for hypothesis testing.

The factors of individual value are constructed from question 1-18 in part II of our questionnaire. As revealed in table 4, two factors, namely, "result-driven" and "morality" have been identified.

Table 4
Individual Values Factor

| Question | Factor Loadings | |
	Factor 1	Factor 2
As long as it does not interfere with the works, it is acceptable to do personal stuffs during office hours	.341	
In order to attract business, it may be necessary to lower your moral standards	.460	
Interpersonal relationships are crucial in business success	.564	
As long as you are not violating the law, anything can be done in order to enhance the profitability of your company	.381	
The best way to get out of office politics is to stay away from them.	.293	
There can never be too much deception in business	.505	
It is an accountants' job to minimize the amount of taxes payable to the government	.507	
It is important for the boss to have complete control	.428	
The loopholes of the law are only a technical issue.	.668	

It is forgivable not to report unfavorable information in order to promote sales	.519	
It is legitimate to lay off inefficient workers	.446	
Being loyal and stubborn will result in a personal loss.	.415	
It is necessary to trade family relationship for personal success	.437	
Having principles is more important than being flexible		.547
A promise should not be broken even if it means personal losses		.521
Losing money is better than exercising business fraud		.515
Testifying God is always a priority in the work place		.503
Being responsible is the most precious value and principle		.382
Factor description	Result-driven	Morality

The "Church" factors are constructed from question 30 from III of the questionnaire. The participants are asked to subjectively judge their churches. Through factor analysis, we define two factors: "Personal-oriented church" and "Society-oriented church" to classify the local churches. It is noted that these two parameters are not mutually exclusive. A church can be both personal-oriented and society-oriented. These two factors reflect the focuses of different local churches and how they influence the decision making of their congregations. (See table 5)

Table 5
The "church" factors

Question	Factor Loadings	
	Factor 1	Factor 2

Church's caring towards brothers and sister	.861	.042
Church's teaching from the bible	.706	.394
Church's assistance towards brothers and sisters	.569	.411
Church's ability to help brothers and sisters who are in trouble	.736	.281
Church's willingness to oversea missions		.769
Church's willingness to perform social services		.735
Church's willingness to care for social problems		.666
Factor description	Personal-oriented church	Society-oriented church

The work ethical viewpoint factors are quantified using some of the Questions in part II. We have developed two factors: "Index of Responsibility" and "Index of Faith". The "Index of responsibility" measures how much of the participants' working attitude is driven by "responsibility" and the "Index of faith" measures how much of the participants' working attitude is driven by religious teachings.

To measure the 'index of responsibility', 5 questions are selected. They are question 11, 1 score is assigned for choosing "Agree" or "Strong Agree" and zero for "Disagree" or "Strong Disagree", question 20b, 1 score for "Submissive to God" and zero for other choices, question 21b, 1 score for "Spreading gospel to coworkers" and zero for other choices, question 22b, 1 score for taking "Religious beliefs" and zero for other choices, and question 23b, 1 score for the item of "Applying Faith" and zero score for other choices. The highest total scores of the five questions is 5 and the lowest is zero. Below 2 score is classified as "weak level" of faith whereas above 2 is classified as "strong level".

Similarly, the 'index of responsibility' is made up from 5 questions in the same section. For Question 1 and 17, 1score is assigned for "Disagree" or "Strong Disagree" and zero for "Agree" or "Strong Agree". To question 19b, 1 score is assigned for choosing "Responsibility" and zero score for other choices, question number 20b with 1 score for the item of "Diligent", "Practical" or "Honesty" and zero score for other choice, and question number 21b with 1 score for the item of "Having great reputation within your industry" and zero score for other choice. Total score of the five questions lies between 0 and 5. Score below 2 is classified as "weak level" of responsibility whereas above 2 classified as "strong level"

Beside the newly constructed variables, our study model also includes personal information in part III of our questionnaire like Gender, Age, Educational level, Parents' educational level, study Major, Years of wok experience, occupation type, nature of Job, Company type,9 Earnings, number of employees in participants' company, Faith, Habits, Family relationship and past experiences etc. Applying the multinomial logistic regression method, we examine the likelihood of the variables mentioned above affecting both judgmental behaviors and internal struggles.

4.0 EMPIRICAL FINDINGS

To search for an acceptable model, we can either start with a relatively simple formulation capturing the basic relationships under investigation, and then argument this in the light of evidence of misspecification (called specific to general modeling approach or backward searching), or start with as full a specification as possible, and then test down to remove unnecessary details (called general to specific modeling approach or forward searching). Based on Hendry (1979) and Pagan and Sagan (1984), specific to general approach necessarily means passing through a sequence of 'wrong', that is unacceptable, versions, with all the resulting problems of inference from a misspecified model. Obviously, this procedure overestimates the effect of the variables added early, and underestimates the variables added later. Alternatively, backward search is free of the prior subjective prejudices of the researcher for a particular specification. Although this approach might involve inefficient estimation

in the early stages, it has the merit of avoiding the misspecification error[16] because the 'general' model nests within it all competing hypothesis or theories and concerning the phenomenon under investigation and hence it can explain existing data and satisfy various tests for misspecification[17]. By comparing various modeling, for example, Chan and Lee (1996, 1997) find that Hendry's general to specific modeling approach is seen to provide a data-acceptable restricted model that out-performs the alternatives. In this study, we therefore employ general to specific approach to search the final preferred model.

Using multinomial logistic regression, we analyze participants' responds based on their judgmental behavior (the cases), individual value, work moral viewpoint, earnings, faith, habits, family relationships, past experience and the church factor. We finally derived two statistically significant models: called them Model A and Model D. We will try to understand the underlying reasons behind decision-makings of Hong Kong Christians.

Model A and Model B use different types of Christians as base category. Model A uses Christian type I whereas model D uses Christian type IV. These models compare other Christian types with their base categories. As a result, we can look at the characteristics of the Christians belonging to each of the types. In fact, the combination of model A and model D is sufficient to analyze the characteristics of each of the four types of Christian. (See Table 6 and Table 7)

For instance, using Model A, we observe that major distinction between type I and type II Christians is the strength of the struggle index. One major determinant of the struggle index is the gender of the Christian ($p<.05$). Since the magnitude of the parameter associated with the male dummy is positive (0.541), this implies males Christians have relatively less struggles when dealing with work place ethic problems.

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[16] For details, see Steward and Gill (1998)

[17] For details, see Thomas, R. L.(1997), Modern Econometrics: an Introduction, Addison-Wesley

Table 6

Judgmental behavior analytical results for Model A
(Base category: Type I Christians)

	Christian II			Christian III			Christian IV		
	B		Exp(b)	b		Exp(b)	b		Exp(b)
Intercept	-.527	(.522)		-1.885	(.620)***		-.740	(.580)	
[Reading Type : History/ Social Science = No]	.265	(.358)	1.304	1.028	(.460)**	2.795	.035	(.395)	1.036
[Company Type = Government]*	-.479	(.402)	.620	-.389	(.407)	.677	-1.401	(.572)**	.246
[Company Type = Private enterprise]	.409	(.571)	1.506	-.255	(.690)	.775	.691	(.604)	1.995
[Company Type = Government sponsored]	.108	(.416)	1.115	-.093	(.428)	.911	.013	(.459)	1.013
[Company Type = Non profit]	.964	(.603)	2.622	.395	(.674)	1.484	-.107	(.794)	.899
[Company Type = Church/Christian Organization]	-.063	(.665)	.939	.850	(.587)	2.340	.730	(.631)	2.075
[Company Type= Private]	.045	(.335)	1.046	-.459	(.366)	.632	-.026	(.378)	.975
[Company Type= Private (Medium size)]	.852	(.910)	2.343	1.298	(.892)	3.662	.542	(1.054)	1.720
[Gender= Male]*	.541	(.254)**	1.718	.322	(.274)	1.381	.625	(.294)**	1.868
[Value : Result-oriented]*	-.070	(.129)	.932	-.252	(.139)*	.777	-.543	(.150)***	.581
[Hours of devotion and bible study in a week]	-.027	(.151)	.974	.337	(.158)	1.401	-.034	(.169)	.966

Note: Numbers in parentheses are standard errors.

*p<0.1, **p<0.05, ***p<0.01 (two-tailed).

Table 7

Judgmental behavior analytical results for Model B

(Base category: Type IV Christians)

	Christian I			Christian II			Christian III		
	b		Exp(b)	b		Exp(b)	b		Exp(b)
Intercept	-.289	(.661)		-.155	(.650)		.962	(.572) *	
[Stable church goer : Short term mission/visitation = No]	.425	(.615)	1.530	.412	(.608)	1.509	-.868	(.521) *	.420
[Gender= Male]*	-.898	(.311)***	.407	-.185	(.309)	.831	-.694	(.323)**	.499
[Value : Result-oriented]	.397	(.157) **	1.487	.428	(.158)***	1.534	.151	(.163)	1.163
[Number of staffs within work place]	.174	(.061)***	1.191	.065	(.061)	1.067	.086	(.063)	1.090

Note: Numbers in parentheses are standard errors.

*p<0.1, **p<0.05, ***p<0.01 (two-tailed).

Under Model A, the difference between Type I and Type III Christian is the degree of obedience. Important determinants of the obedience index include value, reading habit and personal devotion time. Our results indicate that those who read more books about history and social science or those who devotes more time to God are more likely not to follow their companies' unethical orders. Combining with Model D, the difference between Christian Type IV and Type II is also hinges on the degree of obedience. The most important determinant is also on personal values (p <0.05). Christians who are more result-oriented tends to obey the decision made by their management while those who are place a higher value on ethical standard are more likely not to follow.

Similarly, we use model A to compare Christian Type I and Type II and use model D to compare Christian Type III and Type IV. We conclude that both gender and struggle index are important determinants. Females have a higher struggle index than males. We can use similar analysis to compare other pairs of Christian Types and we can derive the following five major findings:

Finding 1
Males struggles less than females in ethical problems in their work place. One possible explanation is that females are more sensitive to work place ethics or males are likely to relax and neglect them.

Finding 2
The more "result-oriented" a Christian is, the more likely it will obey and follow management's decisions.

Finding 3
The larger or the more rigorous their work place, the more easily for the Christians to obey and follow management's decisions.

Finding 4
The longer devotion time a Christian has, or the more history/social science books a Christian reads, the more unlikely a Christian disobey its own wish.

Finding 5
The more short-term missions or visitations performed by the Christian, the lower the struggle index.

Our findings indicate that the underlying reasons why we have four different types of Christians are gender, personal values (The degree of "result-oriented"), working environment, the organization type of their companies as well as personal faith habits and so on.

5.0 CONCLUSION

In the beginning of this paper, we have presented the methodology of our research. Using a questionnaire, we quantified how Christians face ethical challenges in their workplaces. We contribute by examining the current situation of Hong Kong Christians. Now, we will summarize our findings.

Our studies tell us that the middle aged, middle class Christians behave quite differently towards ethical work place issues. The major determining

factors are gender, value (the degree of result-oriented), their working environment, their company's organization, and their personal religious habits. Our conclusion is as follows:

Our model indicates the faith parameter; the responsibility parameter and the church factor parameters are not significant in Christian work place ethic decision-makings. This implies the meaning (faith parameter) and the attitude to work (responsibility parameter) are not key determinant on how Christian behaves. At the same time, faith (faith parameter) and church's teaching (the church parameters) do not play important roles in determining ethical standards. Our result suggests that there is a lack of co-relationship between faith and work place for the middle-aged Christians in Hong Kong. However, we also find out that value and Christian habit are correlated statistically. Therefore, we cannot completely reject the relationship between faith and work place ethics. Since all participants are Christians in our dataset, we cannot conclude if the relationship between Christianity and work place judgmental behavior is causality or correlation. At the same time, our faith index measures the degree of integration of faith in work force, not the degree of absolute Christian faith. The higher index a person has, the more he integrates faith in his workplace. Similarly, our church factor refers to the area-focus of its teaching, not the degree of biblical teaching towards its congregation. Our results indicate that both of these two indexes are insignificant in determining what Christians will do under our stimulated judgmental behavior analysis. On the other hand, the major determinants of the decisions are some personal factors (like gender, degree of result orientation, habits) and some objective environments (like the culture of the company and working environment).

The above two points reflect a basic principle. The key determinations of work place ethical behaviors are not a worker's working attitude or his education. Rather, it is the person's habits and his ability to survive under hostile environments. Work place ethics are part of a working adult's daily life; it is likely that we will involuntarily make decisions according to our accumulated knowledge, our personal habits. These decision-making processes will likely to bypass our recognition and principles.

We have found that gender plays an important role in ethical decision-makings. This reflects different gender is different in terms of working attitude, thinking style and spiritual status. We do not understand the reasons behind this and we will not comment any further. However, we believe that is one of the reasons why males and females complement each other. This is not only true in marriage, but also true in the public sector. With males and females working in the same company, it creates advantages for the company to look at things in more than one dimension. With the social status of male and female converging, we need to understand the difference between each other. This way, we can be better prepared for work place ethical challenges and minimize possible hurts.

We have found that the more result-oriented a person is, the more likely he will follow orders. This implies the obedience index is positively related to the degree of result-oriented. This finding, however, cannot lead to the conclusion that more result-oriented Christians are more likely to give up on their faith. Our result does not indicate that result-orient and moral standard are negatively correlated.

We have found that the larger, or the more rigorous a company is, the more likely Christians will obey management decisions. This implies working environment has significant limitation on personal judgments. Possible explanation is that an individual's influences are smaller when the company is bigger. Disobeying management may result in stress and negative influences. With the globalization of our world's economy, companies get larger and larger. This may create more and more ethical problems in work places. This can be a disastrous social problem.
Our result indicates that religious habits can affect work place ethic decisions. Religion does play a role in contemporary business ethical behaviors. However, religious habits need time to develop. One indication is that fellowship and discipleship trainings are more effective than lecture-styled talks and seminars.

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