

Culture and Finance*

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〈abstract〉

Culture has been the important issue of the social sciences. Since Hofstede introduce the cultural dimensions, many researchers explore the comparative studies employing his methods. To the finance area, empirical studies recently have raised concerns on the influence of culture value on financial decision making. Researchers have found the significant relations between culture dimensions and investors' risk conversion, market returns, capital structure, dividend policy and corporate governance. This paper would give a brief definition of culture values in finance context, and their impact on various aspects of finance.

Keywords : Culture Value, Culture Dimension, Corporate Finance, Risk Taking, Market Return

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I . Introduction

This paper reviews studies on the influence of culture value on finance. Researchers in this topic have attempted to answer the question: do culture backgrounds have any influence on financial decision making?

The role of culture in economic literature has been studied since Weber (1930). However, culture participation in finance literature has been often “forgotten” because of its ambiguity and difficulty to measure : “It is so broad ... that it is difficult to design testable, refutable hypotheses (Guiso et al., 2006).” Not to mention how to measure culture, the definition of culture has been in arguments for a long time. Boy and Richerson (1985) define culture as “transmission from one generation to the next, via teaching and imitation, of knowledge, values and other factors that influence behavior.” Hofstede and Bond (1984) view cultures contains certain values, which define human behavior and perception of the world. Adler (1997) argues that culture values would influence firstly attitude and then behavior. Researchers in finance widely rely on Hofstede (1980), Cultural Values of Schwartz (1994) and some use Gelfand (2006) culture tightness/looseness.

As mentioned, the study on the relationship between culture and finance is relatively new, however, make a substantial contribution to finance literature. Eun, Wang, Xiao (2013) found that national culture is significantly related to stock price synchronicity. Bae, Chang, and Kang (2012) discovered the influence of culture on firms’ determination of dividend policy. Stulz and Wiliamson (2002) found that culture have significant impact on creditors protection. There have been more studies on culture covering all other aspects of finance, which we would introduce in the next parts of this paper.

This literature review aims to enhance the perception on the relationship between culture and finance: the reason why culture should be considered in finance study. The matter of culture gives more evidence to the implications of behavioral finance.

The reminder of this paper is structured as following: we first summarize the definitions of culture values that are widely used in financial research. The second part covers research about culture on different topics of finance: Cultures and Risk Taking, Cultures and Market Return, Cultures and Capital Structure, Culture and Dividend Policy, and Cultures and Corporate Governance. Final part is the conclusion.

II. Definition of Culture and Culture Variables

A part from nationality, language and region, the following culture values are used widely as instrumental variables and culture proxies.

1. Hofstede : Culture Dimensions

Numerous studies rely on the comprehensive, empirically based understanding about culture by Hofstede (1980). He defines culture as the collective programming of the mind which is primarily manifested in values and norms, and also more superficially visible in rituals and symbols; importantly culture in his study refers to national culture. He conducted survey with 116,000 questionnaires from more than 70 countries in the 1960s~1970s, continued by six subsequent cross national studies between 1990 and 2002 and Chinese surveys (developed with Chinese managers) in 23 countries in 1991. According to his theory, culture breaks down into four original dimensions: Individualism, Power Distance, Masculinity, and Uncertain Avoidance, and latter added dimensions : Long-term orientation and Indulgence vs. Restraints, explained as following :

Individualism (IDV), opposed to *Collectivism* : “The degree to which individuals are integrated into groups.” High individualism is assigned to society which stresses more on personal achievements and individual rights, and less on interpersonal relationships. In contrast, in collectivist society, people are integrated into cohesiveness in groups, which protect members and require unquestioning loyalty. Success or failure is groups’ responsibility. In Hofstede’s measures, high IDV seem to come from groups of developed and western countries while low IDV are from less developed and eastern countries. The U.S at no doubt scores the highest at 91 points while Guatemala scores the lowest at 6 points.

Power Distance Index (PDI) : “Power distance is the extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally.” PDI shows very high scores for Latin, Asian countries, African and the Arab areas. Meanwhile, Anglo and Germanic countries have lower PD scores.

Masculinity (MAS), vs. *Femininity* : “The distribution of emotional roles between

the genders.” High masculine cultures emphasize on competitiveness, ambition and power, and differentiate dramatically the roles of man and woman. On contrary, Feminine culture focuses on the equality of man and woman in creating relationship value and quality of life. Nordic countries score the lowest in MAS (5 for Norway, 8 for Sweden). High masculine culture could be found in Japan (95), Germany (66), etc.

Uncertainty Avoidance Index (UAI) : “A society’s tolerance for uncertainty and ambiguity.” High UAI cultures tend to avoid unknown circumstances and cautiously adapt to changes by creating and following rules and regulations. While low UAI cultures appeal to changes, unstructured organizations, and minimize rules as possible.

Long time Orientation (LTO) is the fifth dimension created after the above original four by conducting a Chinese survey along 23 countries. It was first called : Confucian dynamism. Long term orientation is described as persistence, saving and looking towards the future, tending to invest in real estate and unclear principles between good or evil. While short-term orientated organizations focus more on the past and present value, protecting one’s face, tending to invest in mutual funds and defining clear line between good and bad.

According to Hofstede measures, high scores in LTO are found in China (118), Japan (88), Hong Kong (96) and low scores are shown in the Anglo countries and Muslim world.

Indulgence vs. Restrain (IVR) measures the control level of society in human needs and wants. Indulgent society encourage people to pursue their desire, enjoy life and have fun, whereas restrained society restrains the gratification of needs by regulations and strict norms.

This dimension has not been widely used in research or management practice because the ambiguities and limitations of data.

All six dimensions above have been demonstrated by Hofstede (2001). Despite all critics, Hofstede’s comprehensive unique study on culture has been widely used in research, as well as management practice. In our literature review, almost all of the papers use Hofstede works as the variables for culture, with the cut of some dimensions for their own research interest.

2. Schwartz : Cultural Values

Schwartz (1994) defines the seven types of value which are conservatism, intellectual and affective autonomy, hierarchy, mastery, egalitarian commitment, and harmony.

Conservatism : The members of conservative society believe that individual interests should be reconciled with group interests. Therefore, family security, self-discipline, and public image are emphasized in conservative societies.

Embeddedness vs. Autonomy : Embeddedness society encourages individuals to participate in an entity : sharing value and striving towards the goal of the entity. Whereas, in autonomy society, individuals are seen as autonomous, have their own value and independent ideas about life.

Hierarchy vs. Egalitarianism : In hierarchical societies, individuals and resources follow a hierarchically order, and individuals are supposed to complete their definite roles in organization. Egalitarian societies share the equal values and welfare, pursuit the well-being for all individuals in society.

Mastery vs. Harmony : Mastery refers to situations where individuals thrive themselves for success and competence with an aim to master direct interested fields. Whereas in harmony situations, individuals choose to fits into the environment, rather than change or exploit it. Harmony society emphasizes peace and environment protection.

3. Gelfand

Tightness vs. looseness : Tight cultures have “many strong norms and low tolerance for deviant behavior”, while loose cultures “have weak social norms and high tolerance of deviant behavior.” Society with high Tightness would motivate individuals to have homogenous behavior in processing and evaluating ideas.

III. Culture and Corporate Finance

1. Cultures and Capital Structure

Chui et al. (2002) examined a sample of 5591 firms across 22 countries and found

that countries have lower debt ratio if they scores high on the Schwartz's Cultural Dimensions of Conservatism and Mastery. They hypothesize that firms in countries with high scores on Conservatism would focus on social harmony, public image preservation, security and conformity, so use less debt in their capital structures. Also, countries with high scores on Mastery place great importance on control and individual success, so firms in these countries tend to have small debt.

Chang, Wee, and Yi (2012) use Hofstede's culture factors to test the effect of culture on firm's choice of debt maturity. They studied 80,000 firm-year observations from 33 countries with the division of countries into market-based system and bank-based system, and found that Hofstede's uncertainty avoidance index (UAI), masculinity (MAS) and long-term orientations (LTO) are significantly negatively to debt maturity in country with bank-based system. Particularly, lenders in high UAI cultures tend to limit risk from their investment by shortened debt maturity. Also, in countries having higher LTO scores, flexible financing is required for the sustainable growth, so investors prefer more transitory debt than long-term one. The paper also provided explanations for the influence of MAS on debt-maturity through two stories : asymmetric compensation and signaling theory. The first story happens when rewards for success is much greater than the cost for failure, so it pushes the investors to invest whenever opportunities arise, so more short-term financing is needed. The signaling theory explained that managers in high MAS culture always want to show good superior ability and recognition, so they would prefer cheaper short-term debt. And why these effects are significant only in bank-based systems? As the authors argue, the investor protection, rather than culture in market-based systems would influence bank's choice of debt.

2. Cultures and Dividend Policy

Shao, Kwok, and Guedhami (2008) found a link between national culture and dividend through agency and signaling considerations. In detail, dividend payout is shown to be positively related to Schwartz Conservatism, and negatively related to Mastery. They hypothesized that in country with high score in Schwartz Conservatism, managers try to maintain self-disciplined, thus have less incentives to keep cash; whereas investors

tend to require secured dividend policy “bird in hand’ and signaling effect. The motives from two sides cause higher dividend payouts in conservative countries. Another culture dimension, “Mastery” emphasizes on independence, so managers in this culture would tend to finance by internal financing, thus keep more cash on hands, and as a result pay out fewer dividends.

Another important research Bae, Chang, and Kang (2012) uses Hofstede’s culture dimension to examine the influence of culture value on dividend policy. After controlling for governance and firm specific factors, they found uncertainty avoidance and long-term orientation to be significantly related to firms’ determination of dividend pay-out. Particularly, under culture with high Uncertainty Avoidance behavior, both managers and investors would prefer to keep cash on hands, thus if investor protection is high, level of dividends in a country would be positively related to country’s UA score. High Long-term Orientation culture would induce investors to relinquish cash from dividends payments for future investments, thus LTO would be negatively related to the levels of dividends in a country.

3. Cultures and Corporate Governance

Stulz (2002) found that culture have significant impact on creditors protection. Particularly, creditor rights in Catholic countries are weaker than in other religions, partly due to the emphasis of international trading. Also, Catholic countries, especially Spanish-speaking Catholic countries have weaker enforcements of right. The paper also found that the impact of country’s religion predicts the variation in creditor rights among countries, better than its openness to international trade, language, income per capita or legal system.

Beckmann, Menkhoff, and Suto (2007) conducted surveys with assets managers from the United States, Germany, Japan and Thailand to test the influence of Hofstede culture dimensions on their behaviors. The paper showed that high Individualism could predict less herding behavior (a phenomenon when investors make investments decisions by following other investors.). The result seems obvious since in country where individualism take place, in this test the U.S and Germany, investors trust themselves in making decisions, rather than follow the trend. The paper also found that Hofstede Power

Distance lead to aged and less experienced managers in upper hierarchy in society like Japan and Thailand. Also, Countries that score high in Masculine (Japan and Germany) take great importance on gender differences, i.e, men takes part more in upper managing and holds more assets responsibility, compared to feminine countries (the U.S or Thailand). Last but not least, high Uncertainty Avoidance culture (i.e. Japan) motivates managers to stick their firms' performance closely to market benchmark and take more efforts on information research.

Han, Kang, Salter, and Yoo (2008) discuss the roles of culture in explaining managers' earnings discretion across countries with different level of investor protections. They found that the magnitude of earnings discretion is positively related to Individualism index and negatively related to uncertainty avoidance index. Moreover, in countries where investors' protections are strong, the effects of those culture factors on discretionary accruals become pronounced.

Choi, Perris, and Jayaraman (2013) found that CEO forced turnover is negatively related to Hofstede Power Distance and Long-time Orientation. The paper explains that countries with high Power Distance and Long-time Orientation focus on maintaining organization tradition, and give more tolerance for upper managers if they fail.

IV. Culture and Other Fields

1. Culture Values and Risk Taking

Bontempo and Weber (1997) accessed cross cultural difference in the perception of financial risks by studying group of university in Hong Kong, Netherlands, and the U.S and group of Taiwanese security analysis in a lotteries games (i.e. transferring to Prospect Theory, explained below). They found that risk judgments differed with nationality: students from Hongkong and Taiwan consider the level of the losses more than the probability of gains or compensating the losses, when buying the lottery, compared to students from Holland and the U.S.

In another paper, Weber and Hsee (1999) found that Chinese are risk-seeking in investment than Americans, explained by "cushion hypothesis", which suggest that people in a collectivist society, such an China are more likely receive financial help if

they are in need (i.e. cushioned if they fell), as a result, more willing to take risk than those in individualistic society.

In general, prospect theory study how people make preference, risk attitudes in gains and loss and how people weigh probabilities. Regarding study on prospect theory with culture related, Wright and Phillips (1980) found that Hongkong participants, when judging probability, assign more extreme value (e.g. 100% vs no chance), while British participants can express their judgment with more different numerical measures. Rieger, Wang, and Hens (2011) provided a comprehensive work on Prospect Theory around the World by conducting large-scale international survey on risk preferences in 45 countries. The study show substantial cross-countries' differences in risk aversion, loss aversion and probability weighting, and more importantly, these countries' risk attitudes are significantly related to Hofstede culture factors individually and Uncertainty Avoidance

Griffin, Li, Yeu, and Zhao (2013) used standard deviation of operating income as measure for corporate risk-taking and harmony, individualism and uncertain avoidance as variables for culture. With a sample of 35 countries from 1997~2006, after controlling for country level, they found a negative association between harmony and corporate risk-taking, a positive association between individualism and risk-taking and negative association between uncertainty avoidance and risk taking. Moreover, their study also showed that cultures have indirect effect on firms' attitude towards risk, in the way that it embedded in formal institutions of a country, such as shareholder rights and rule of law. In detail, they found that the influences of cultural value are strengthened in firms, which actively engaged in earnings smoothing, and weakened in large firms and in countries with strong creditor rights.

2. Cultures and Stock Return

Notable research on this topic is Chui, Titman, and Wei (2005). In this paper, they examine the influence of culture factors on momentum strategies across 41 countries. They found that there are significant and persistent differences in momentum profits among those countries. And these differences can be largely explained in Hofstede individualism measure. Specifically, when employing a zero-cost (long minus short) momentum portfolios, average monthly returns from those countries with individualism

indexes in the top 30% are significantly higher (about 6%) than in those countries with individualism indexes in the bottom 30%. In addition, when testing the reversals of momentum (Daniel, Hirshleifer, and Subrahmanyam, 1998; Hong et al., 1999), they found that countries with higher Individualism tend to have a higher magnitude. Their explanation for the effect of this culture dimension on momentum strategy is that: investors in less individualistic cultures believe in their own peers, rather than consider the available information. Furthermore, they tend to be less over-confident, thus less engage in strategies that generate momentum profits.

Some researchers observed market anomalies that would have no reasonable explanation, but perhaps culture. Hens and Wang (2007) place a question of the case of Italy : In <Table 1>, Italy is the only country where the volatility of stock returns for positive is higher than for negative. Papa (2004) explained this result in a culture context : Italians are more risk-seeking than investors in other countries, thus they invest more and take more profits when the market rise. Hens and Wang also questioned that Italy, contrary to other countries, gained higher returns on glamour (or growth) stock than value stocks.

Exploiting the relationship between Culture and M&A, Chakrabarti, Murkherjee and Jayaraman (2009) used a sample of over 800 cross-border acquisition and found that the long run performance of the acquisitions are related to Hofstede metric of cultural distance between the countries of acquiring and target firm. In particular, the acquisitions perform better in long-term if the countries of the acquirers and target firms are highly cultural disparate. And these positive impacts are not captured in the announcement period. They explained the result that the acquirer with higher synergies and better organization would successfully integrate the target firm, leading to better performance in the long run. However, the exact underlying features of culture that drive these successes still remain questions.

Eun, Wang, and Xiao (2013) made an important finding that culture factors affect cross-country's co-movement of stocks : stock price synchronicity is positively correlated with Gelfand tightness measure and negatively related to Hofstede's individualism measure. The paper explains that in a tighter country, investors have a similar way to gather and evaluate information, leading to indifferent behaviors in choice of

portfolios, trading strategy and market reaction. As a result, stock price in these countries tend to have greater co-movements. Similarly, countries with more collectivist investors expect more herding behavior, so more correlation in trading behavior, also cause more stock synchronicity. In general, the authors conclude that culture is an important omitted variable when examining cross-country stock-price co-movement.

<Table 1> Characteristic of Return, Risk and Correlation when the Market goes Up and Down
The table is from Papa, B. (2004) "Stock market Volatility : A puzzle? An investigation into the causes and consequences of asymmetric volatility." They calculate the average return and volatility when the market went up and down for the period 1970~2003. The last three columns show the correlation of each market to the U.S stock market.

MSCI STOCKS INDEX								
	Sample Period	Mean up(%)	Mean down(%)	Volatility up	Volatility down	Corr	Corr up	Corr down
World	1970. 1 ~2003. 10	21.00	-15.00	14.35	17.86	0.89	0.86	0.90
USA	1970. 1 ~2003. 10	24.00	-17.00	15.65	17.61	1.00	1.00	1.00
GER	1970. 1 ~2003. 10	28.00	-23.00	19.63	22.62	0.51	0.35	0.60
UK	1970. 1 ~2003. 10	29.00	-21.00	22.30	23.30	0.61	0.47	0.66
CH	1970. 1 ~2003. 10	25.52	-19.90	17.90	21.15	0.64	0.50	0.70
CAN	1970. 1 ~2003. 10	25.73	-19.11	17.41	19.66	0.71	0.65	0.72
IT	1970. 1 ~2003. 10	35.89	-29.41	25.45	23.84	0.35	0.20	0.41
FR	1970. 1 ~2003. 10	32.94	-26.00	21.71	23.45	0.54	0.40	0.60
AUS	1970. 1 ~2003. 10	28.96	-23.53	20.42	23.74	0.53	0.33	0.62
JAP	1970. 1 ~2003. 10	27.45	-22.05	19.42	20.40	0.36	0.24	0.37

V. Conclusion

The birth of behavioral finance made an innovation in the study of finance; completely contrary to the traditional view of efficient market : Behavioral school emphasizes on the psychology or emotions under financial decision. So it should be naturally conceived

that the influence of Culture on investors' behaviors must be an essential part of behavior study. However, due to the ambiguity and difficulty in measuring culture value, not until lately, finance researchers started to notice and study this topic

This paper attempts to give a brief of studies on the relationship between culture and finance, in some of its aspects, e.g. culture vs. risk taking, market return, capital structure, dividend policy and corporate governance. So far, researchers have focused on the impact of culture on the perception and attitude of investors towards risk, and the differences of national culture on investors' protection. There have not many studies on how culture affects market anomalies, stock returns, generally, how to attach culture values directly to the market. Also, more studies are needed on topics of capital structure and dividend policy. Nevertheless, financial advisors and management should take consideration on the impact of culture when engaging in multinational business.

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