SCAREDY CATS TO COOL CATS: HOW TIME PERSPECTIVE MATTERS IN ATTITUDE AND INTENT TOWARD FINANCIAL DECISIONS

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ABSTRACT

The widely broadcast evidence of a looming economic downturn in late 2008, with a magnitude and length most of us had never before experienced, provided an unusual opportunity to measure the financial decisions of middle income, relatively well educated Americans in a time of financial crisis. The degree of devastation and even panic some "scaredy cat" individuals felt about their financial security and their financial future during the economic meltdown in the late summer and fall of 2008, and the continually higher unemployment rates until late 2010, surely affected decisions about saving and investing funds. This study utilizes the Zimbardo Time Perspective Index (ZTPI) developed by Zimbardo and Boyd (2008), to measure the influence of time perception on financial decisions in that very uncertain environment, while statistically correcting for demographic influences. Although numerous studies have attempted to explain what propels an individual's decisions concerning how much to spend or save, and how risk seeking or risk averse they are, none have utilized the psychology of time perspective. The two original issues examined in this study are (1) the intent to change jobs, and (2) the intent to move funds. As the recession lingered well beyond fall 2008, a refinement of the instrument was used to examine intentions concerning job changes. (Funds would likely already have been moved.) Using the ZTPI questions as a starting point, this study created and tested a second set of tailored questions that included 21 questions specific to time perspectives of financial issues, in an attempt to provide a more accurate picture of the influences of time perspective on the intent to change jobs. Then in late 2012, a third set of data was tested, using 60 modified-ZTPI items. By that time the economy had stabilized and unemployment was inching downward. Those results showed less predictability than when the job market was in crisis, indicating the return to a less emotional, "cool cat" decisionmaking process. However, taken together, these three sets of results indicate both the promise of time perspective on the intent to change jobs, and the usefulness of questions that more directly measure time perspective with regard to finances, in times of general financial crisis.

Key words: time perspective, job, asset allocation, risk

INTRODUCTION

Numerous studies have attempted to understand the factors that make some individuals more or less risk averse in building their investment portfolios, whether in "normal" times or in times of economic downturns. However, none of those studies have utilized the recently published Zimbardo Time Perspective Index (ZTPI) created by Philip Zimbardo of Stanford and John Boyd of Google (Zimbardo and Boyd, 2008), which is very persuasive in postulating that one's perspectives concerning past, present, and future have a major impact on financial decisions. The primary purpose of this study is to examine the effects of how an individual's perception of time determines that individual's attitudes and intended actions concerning job changes in times of national/global financial crises. The secondary purpose of this study is to test whether the standard scale items are more applicable than tailored scale items to this type of problem.

Specifically, the study primarily seeks to learn whether any particular *time perspectives* have strong effects on an individual's intention to change jobs during this financial crisis. The timing was initially fortuitous for researchers, providing a large sample of respondents who were coping with major financial concerns. A secondary objective of this study is to determine whether a second set of scale items that includes questions that are more focused on attitudes toward finances may be a useful refinement of the ZTPI for financial decisions.

This study first analyzed the responses to questionnaires distributed in the fall of 2008 through the spring of 2009, by which time most households, or their friends and extended family members, were feeling some effects of the worst worldwide recession since the Great Depression. Median household net worth fell nearly 40% between 2007 and 2010 (Riley, 2012). Corporations reacted too: of cash grew to nearly two trillion dollars of cash, dubbed "scared money" by 2011 (Whitehouse, 2011). This initial study used the standard ZTPI and other questions designed to capture how economic changes affect one's tendency to seek new employment and his/her intention to move assets to safer forms of investment.

Then, in 2010, when the economy started showing strong signs of recovery – *except for growing unemployment* – a second set of scale items was tested on different respondents, using the same questions from the first model but also including 21 additional questions. These additional questions are based on the ZTPI questions, but their re-wording was designed to focus on time orientation relative to finances. It was expected that these additional questions would provide a refinement for the purpose of this study, and thus would have more explanatory power regarding financial decisions.

One more time, in 2012, when unemployment had leveled off and begun to decline, and as consumer confidence was on the rise, more data were gathered for a further revised model, using 60 questions tailored towards individuals' TPIs applied toward financial issues, including some version of the revised 21 questions distributed in 2010.

LITERATURE REVIEW

Previous studies have advanced our understanding of why some people change jobs and/or careers. Murtagh, Lopes and Lyons' (2012) study supports other-than-rational perspectives of career decision making. Chambers, Benibo and Spencer (2011) examined the usefulness of the theory of planned behavior for explaining the actions individuals intend to take concerning (1) moving funds and (2) changing jobs during a financial crisis. That study's results indicate that the theory of planned behavior substantially explains the intent to move funds but is only moderately useful in predicting job changes.

Time perspective as an explanation for behavior has a long history in the psychology literature. Raju (1980) posited that past-oriented shoppers tend to be rigid and more risk averse, and this is why they tend to not buy on impulse. Gonzalez and Zimbardo (1985) indicated that

future-oriented individuals characteristically delay gratification. The future-oriented individual is also less likely to take risks (Lennings and Burns, 1998; Zimbardo and Boyd, 1999). According to the findings of Karande and Merchant (2012), past orientation positively affects prudence but has no significant effect on impulsiveness; Present orientation has a positive effect on impulsiveness and a negative effect on prudence – both as expected; and future orientation positively affects prudence but has no significant effect on impulsiveness.

Time perspective "is often the non-conscious personal attitudes that each of us holds toward time and the process whereby the continual flow of existence is bundled into time categories that help to give order, coherence and meaning to our lives" (Zimbardo and Boyd, 2008:51). They contend that individuals vary significantly in terms of time perspective, and that these differences strongly and predictably influence individuals' responses to particular situations. They specifically identified six orthogonal perspectives, namely: past-positive, past-negative, present-fatalistic, present-hedonistic, future, and transcendental-future. Some individuals are strongly oriented to one or more of these perspectives while moderately or weakly oriented to the others. Below is a brief explanation of the expected beliefs and actions for a strong orientation toward each of these perspectives:

<u>Past-positive</u>: The past-positive time perspective yields a favorable interpretation of and attitude toward past events, even when those events may objectively be negative. To the extent that "what people *believe* happened in the past influences their present thoughts, feelings and behavior more than what really happened" (Zimbardo, 1980:61), people with a strong past-positive time perspective are not likely to be discouraged by past financial loss. Indeed, they might, like an athlete, see it as the necessary "pain" before a "gain."

<u>**Past-negative</u>**: On the contrary, an individual with a past-negative time perspective will reflect on the past with thoughts of "I could have done better," being predisposed to wondering if it was necessary to go through "pain" in order to have a "gain." A person with this time perspective is likely to take the least risky financial actions, especially if having already experienced less-thanexpected returns or a loss on personal investments.</u>

Present-hedonistic: The individual with a strong present-hedonistic perspective is one who is driven by instant gratification: If it feels good, do it is her/his philosophy (Zimbardo and Boyd, 2008). This means that future consequences (positive or negative) do not direct present behaviors. The strong present hedonist is not only unlikely to have any investment plan but would also not reduce spending on non-essentials even in a declining economy unless directly affected, as with personal job loss. The past, bad or good, is considered as gone forever and therefore undeserving of regrets. Having saved money at all may depend on a low present-hedonistic outlook. Lusardi (1999) finds that households consume today at the expense of tomorrow when they lack self-control (high present-hedonistic) and have not planned for retirement (low future orientation).

<u>Present-fatalistic</u>: The behavioral responses to a declining economy of a person with a strong present-negative time perspective would be similar to those of the preceding type, but the rationale is different. The present fatalist lives for the moment because s/he perceives forces beyond her/his control determining the outcome. Consequently, the strongly present-fatalistic person not only refuses to make plans for the future, but is willing to live with whatever happens.

Future: In contrast to both the strong present hedonist and strong present fatalist, the person with a strong future time perspective is "conscientious, consistent, and concerned with future

consequences" (Zimbardo and Boyd, 2008:64). The future-oriented individual makes very deliberate plans toward desired goals and always conscious of how s/he spends time and is likely to decrease spending in a declining economy as well as take rational steps to protect investments from future losses.

Transcendental-future: This is the most recently identified of these six perspectives: this individual does not view death as the end of life. Material aspects of life, including personal finances and investments, are considered to be transient concerns, not affecting one's ultimate, eternal goals. The individual with a strong transcendental-future orientation continues to feel hope, even under the most dire circumstances. We do not test for this perspective in our models.

Although Zimbardo and Boyd (2008) contend that time orientation is acquired via socialization both at cultural and sub-cultural levels, its effects on subsequent attitudes and behaviors are "non-conscious." One's time orientation has ontological as well as epistemological consequences beyond one's deliberate control. Hence, an individual who, for example, has as a cyclical view of time, as opposed to a linear view, habitually arrives late for appointments and procrastinates in spite of a "conscious" dislike of these behaviors.

Of course, an individual can experience any of these six perspectives at various times. The ZTPI provides a scale that indicates which of these six are strong (with relatively high Index numbers) and are therefore likely to be the individual's major ways of perceiving, vs. those which are weak and have relatively little influence over thoughts and actions.

HYPOTHESES

The ZTPI is the foundation for five hypotheses concerning intent to change jobs. This study departs from the ZTPI in two major ways: (1) After the original ZTPI scale was used in 2008 and 2009, producing marginally significant but not robust results against both intent to change jobs and intent to move assets out of stocks and bonds and into cash, 21 new, financially-tailored ZTPI-type questions were added to the instrument, mainly for past-positive, present-hedonistic and future perspectives, to see if scales that are more financially focused would more strongly capture attitudes toward finances. Because the stock market had begun to stabilize by 2010, intent to move investments into cash is no longer expected to be significant. In 2012, the 21 items were refined further and these constructs were developed and tested, for a total of 60 items. It was expected that individuals would still be *feeling* the effects of the economic crisis, although for most families, the crisis was in the past.

The ZTPI, which is a general scale on one's outlook on life, may produce unexpected results when applied to this or any other specific situation. For that reason, the second and third survey instruments include both the original scale and the financially-tailored questions, in order to collect information beyond that pertaining to the general ZTPI. The first survey instrument is shown in Appendix A. The results of this survey are modeled in Figure B1, shown in Appendix B. These results show that tailoring the scales used to measure the ZTPI constructs may be useful. Only the 2010 survey results, which test whether tailoring is useful against the original ZTPI scale items, and the 2012 survey results with further refined financial scales, are discussed here. The 21 new time perspective financial constructs utilized in 2010 (questions 78 through 101 and later referred to as TPIF items) are shown in Appendix C, and the 60 TPIF2 items tested in 2012 are shown in Appendix D. Some of the survey items are reverse-scaled to protect against positive

response bias. Written instructions were included with the instrument to the participants, as was an assurance of the confidentiality of participants and an explanation of the voluntary nature of participation.

Dependent Variable: Intent to Change Jobs

Intent is the extent to which a person expresses a willingness to exert effort in order to perform the specified behavior, e.g., changing jobs. In this paper, intent to react to the effect of the national/global financial crisis on one's own financial security is measured by changing income streams, with a voluntary employment change. For example, respondents were asked on a 5-point scale how true - 1 = very untrue to 5 = very true - was the following statement: "As a result of how I feel now, I intend to look for a new job."

How a Strong Time Perspective Orientation Is Expected to Influence Intent

A strong past-positive orientation means that a person has a favorable interpretation of and attitude toward past events, even if those events may objectively be negative. The more positive one's perception of the past, the more faith s/he may have that things will all work out well and the less likely s/he is to intend to reallocate assets or change jobs:

H1: A strong past-positive orientation will have a *negative* effect on the intent to change jobs.

This and the subsequent relationships are shown pictorially as arrows from the dependent variable to the independent variable, for all hypotheses, in Figure 1.

A strong past-negative orientation means that a person has an unfavorable interpretation of and attitude toward past events, even if those events may objectively be positive. Therefore, never satisfied, we expect those with a strong past-negative orientation will more readily consider changing jobs:

H₂: A strong past-negative orientation will have a *positive* effect on intent to change jobs.

An individual with a strong present-positive, hedonistic orientation lives for pleasure in the moment. The present hedonist is not only unlikely to have an investment plan but would also not reduce spending on non-essentials even in a declining economy. Therefore, people who are living for today may intend but would not take the trouble to voluntarily change jobs, which is a tedious and stressful process:

H₃: A strong present-hedonistic orientation will have a *negative* effect on the intent to change jobs.

The person with a strong present-negative, fatalistic orientation actually perceives her/himself to be suffering from this economy. The hypothesis here is that pain avoidance will dominate the fatalism. Therefore, if a person perceives sufficient control to change jobs, then the relationship between present-fatalism and intent to change jobs will be positive. However, that relationship is expected to be weak.

Figure 1 – 2010 and 2012 Research Models



H₄: A strong present-fatalistic orientation will have either *no* effect or a weakly *positive* effect on the intent to change jobs.

The individual with a strong future orientation is concerned with future consequences of present actions. That is, the future oriented individual feels responsible for taking actions that will lead toward goal attainment. But, taking a long-term view of situations, future-oriented people are expected to be more likely to view the economic turbulence as temporary and therefore are more likely to stay the course and are less likely to intend to change jobs:

H₅: A strong future orientation is expected to have a *negative* effect on intent to intent to change jobs.

Several demographic control variables - including age, gender, household income, racial identity, religiosity and experience - were also tested, with no significant results expected. Taken as a whole, the model can be expressed pictorially, as shown in Figure 1.

METHODOLOGY

The 2008/2009 Model

Initially, data were gathered in late 2008 through early 2009, during the worst of the financial crisis, measuring the generic ZTPI items, and those constructs' effect on two dependent variables: The first dependent variable, "Intent to Move Jobs," is operationalized as a composite of participants' responses to survey questions. Respondents were asked to indicate, for example, on a 5-point scale how true (1 = very untrue to 5 = very true) was the following statement: "As a result of how I feel now, I intend to look for a new job." The second dependent variable, "Intent to Reallocate Assets," is also operationalized as a composite of participants' plans, in this case, concerning two aspects of their intent to move their assets from financial markets: (1) to banks, and (2) to cash. Again, respondents were asked to indicate, for example, on a 5-point scale how true (1 = very true) were the following statements: "...I intend to move my financial markets into banks." The results of this integrated model were promising, but weak, resulting in two subsequent revisions of scale items. Intent to Reallocate Assets was also dropped from subsequent models, due to the subsequent stabilization of financial markets. The 2008/2009 results are presented in Appendix B and not discussed further here.

2010 Model: Adapting the 2008/2009 Independent Variable Scale Items

The primary independent variables for the 2008/2009 model are the ZTPI constructs from Zimbardo and Boyd's (2008) scale, excluding those for transcendent future orientation. This model produced weak but promising results. This led the authors to question, if items were constructed to be more specific to people's time perspectives on finances, would survey results be more robust? That is, can adapted TPI scales create a more predictive model of people's reactions to a national economic crisis? To test for this research question, scale items that are more focused on financial issues were created to measure the five original ZTPI constructs. With the inclusion of these more focused scale items, it is expected that the revised model will explain more of the variance in intent to move jobs. However, since the data for the 2010 Model were gathered in late 2010, those who intended to move investments into more stable vehicles probably had made that move by then; and with the financial markets stabilizing, intent to move money was no longer expected to be significant. This second, 2010 instrument includes the original ZTPI variables along with 21tailored scale items based on the original ZTPI scale items but written specifically for measuring attitudes toward finances (referred to as TPIF). The tailored scale items are shown in Appendix C.

The questions from the original ZTPI scale are numbered in Appendix A, and the TPIF scale in Appendix C, as:

- <u>Past-negative</u> question numbers: 4, 5, 16, 22, 27, 33, 34, 36, 50, 54 in the ZTPI.
- <u>Past-positive</u>: 2, 7, 11, 15, 20, 25, 29, 41, 49 in the ZTPI and #84 only constructed for the 2010 TPIF,

- <u>Present-fatalistic</u>: 3, 14, 35, 37, 38, 39, 47, 52, 53 in the ZTPI, and 89, 94 and 95 constructed for the 2010 TPIF.
- <u>Present-hedonistic</u>: 1, 8, 12, 17, 19, 23, 26, 28, 31, 32, 42, 44, 46, 48, 55in the ZTPI and 81,83, 88, 90, 92, 93, 96 and 98 constructed for the 2010 TPIF.
- <u>Future</u>: 6, 9, 10, 13, 18, 21, 30, 40, 43, 45, 51, 56in the ZTPI and 82, 85, 86, 87, 91, 97, 99, 100 and 101 constructed for the 2010 TPIF.

Demographic control variables examined are gender, age, race, ethnicity, religiosity, assets and monthly household income. Age is measured in terms of how old the respondent was at her/his last birthday. Monthly household income is measured in terms of the respondent's recollection of the approximate total of all household income earned. Gender is dummy-coded 0 = male, and 1 = female. Race and ethnicity are divided into the two ethnic groups large enough to analyze in this group of respondents, and "other." For the "white" construct, participants are coded 1 = white and 0 for other; for the Hispanic construct, participants are coded 1 = Hispanic and 0 for other. (No other non-white, non-Hispanic group was large enough in this sample to be analyzable.) Similarly, given the small amount of variation present in this sample, religious affiliation is dummy coded 0 = Catholics, 1 = Non Catholics.

2012 Scales: Refining the 2010 Independent Variable Scale Items

While the 2010 model produced materially better results than the 2008/2009 model, there was room for improvement in the convergent validity of the scales. Thus, several new specific items were tested using only the revised tailored scale (TPIF2) in late 2012. The model was also analyzed to evaluate the persistence of the 2010 findings.

The questions from the TPIF2 scale utilized in 2012 are numbered in Appendix D as:

- <u>Past-negative</u> question numbers: 4, 16, 26, 33, 49 and 53.
- <u>Past-positive</u>: 11,19,24 and 40,
- <u>Present-fatalistic</u>: 36, 37, 38 and 46.
- <u>Present-hedonistic</u>: 8, 12, 22, 41, 43, 45 and 54.
- <u>Future</u>: 10, 39, 42, 44 and 50.

Sample and Data Collection

2010 Model. Approximately 221 members of a South Texas university's students participated in the 2010 version of this survey, producing 220 usable responses. Investigators asked colleagues for permission to survey their students, who ranged from freshmen through graduates. The median age of the participants was 23 years, with a range from 17 to 53. Fifty-three percent of the participants are female. Respondents' experience varied from very little perceived business

experience to extensive business experience, with the average participant's self-rating as an experience level of 2.8 on a 5-point scale.

<u>2012 Model</u>. An additional 495 students were surveyed for the 2012 version of this study. The median age of the participants was again 23 years, with a range from 16 to 68. Fifty-five percent of the participants are female. Respondents' business experience also showed great variation, with the average participant's self-rating as an experience level of 2.6 on a 5-point scale. Students were selected on the basis of convenience. Care was taken, nevertheless, to ensure that participating students were distributed from freshmen through graduates.

ANALYSIS

To explore any possible bias resulting from the use of students, bivariate correlations were examined between demographic variables and dependent variables of interest. No significant correlations were found, except as noted in the results section. Very few of the respondents were 18 or under, and removing these responses from our data set did not significantly affect our results. Based on these results, it appears that demographic factors are generally not significant in explaining intent; therefore, the use of student subjects, whose demographic data may not be reflective of the general population, can provide useful information.

The overall model and the individual scales used to measure constructs and their underlying latent constructs, shown in Figure 1, are assessed using partial least squares (PLS) analysis. PLS is the most logical method to analyze the theoretical model because it simultaneously addresses both the effectiveness of the model and the reliability of the general underlying measures as applied to this specific economic study. Other advantages of PLS are relaxed error and distribution assumptions (Wold, 1982).

PLS factor loadings are calculated to assess the construct validity of each of the measurement items. A factor loading of 0.707 or greater is considered to be a substantial correlation between the indicator and the latent variable (Barclay et al., 1995; Chin, 1998); however Barclay et al. (1995) note that it is not uncommon for items in newly developed scales to fail to meet the 0.707 level of reliability. Where factor loadings are smaller, these items will generally be weighted less, because PLS minimizes the error variance for the whole model.

RESULTS

Both the 2008/2009 Model (shown in Appendix B) and the 2010 Model were analyzed similarly. The analysis techniques for the 2008/2009 model and the results are relegated to Appendix B for parsimony. For 2010, the results are discussed in detail. The results from the 2012 revised scales Model are contrasted to the 2010 Model here.

Comparing ZTPI Scale Items to TPIF Items in the 2010 Model

Because the underlying scales, developed for day-to-day decisions and actions, do not capture the essence of such financial attitudes and choices under financial duress, the 2010 Model

was run with the inclusion of 21 modified present-hedonistic and future items to see if they would be better for capturing the impact of more specific attitudes on intent regarding finances.

The results of the confirmatory factor analysis suggest that the measurement items within each original scale are only moderately correlated with the underlying latent variable. The factor loadings and weights for data collected in 2010 are for the ZTPI items is shown in Table 1, and Table 2 shows results for the TPIF 2010 items.

Factor	Item	Factor	Weight	Factor	Item #	Factor	Weight
Intent – Move Job	# 74	0.8085	0 4473			Loaung	
Intent – Move Job	74	0.8983	0.4473				
Intent – Move Job	76	0.7982	0.3219				
Present Hedonistic	1	0.0250	0.2019	Past Positive	2	0 3404	0.0921
Present Hedonistic	8	-0.0463	-0.0452	Past Positive	7	0.2439	0.0721
Present Hedonistic	9	-0.0460	-0.0313	Past Positive	11	0.4621	0.4438
Present Hedonistic	12	-0.0722	-0.0391	Past Positive	15	-0.1121	-0.0918
Present Hedonistic	12	0.0722	0.0548	Past Positive	20	-0.0672	-0.0506
Present Hedonistic	19	-0.0501	-0.0351	Past Positive	29	0.0072	0.0994
Present Hedonistic	23	-0.0420	-0.0293	Past Positive	49	0.2312	0.8099
Present Hedonistic	24	-0.0308	-0.0392	Past Negative	4	0.1509	0.0705
Present Hedonistic	26	0.7849	0.4701	Past Negative	5	-0.1140	-0.0618
Present Hedonistic	28	0.7713	0.3947	Past Negative	16	-0.0763	-0.0671
Present Hedonistic	31	0.3918	0.2529	Past Negative	22	-0.1160	-0.1035
Present Hedonistic	32	-0.0020	-0.0179	Past Negative	25	-0.0534	-0.0498
Present Hedonistic	42	-0.0075	-0.0186	Past Negative	27	0.6801	0.6492
Present Hedonistic	44	0.3990	0.2834	Past Negative	33	0.6793	0.6625
Present Hedonistic	46	0.2913	0.2866	Past Negative	34	-0.0292	-0.0294
Present Hedonistic	48	0.1643	0.0847	Past Negative	36	-0.1213	-0.0685
Present Hedonistic	55	0.0427	-0.0119	Past Negative	50	0.2956	0.1862
Present Hedonistic	56	0.0520	0.0358	Past Negative	54	-0.0608	-0.1115
Present Fatalistic	3	0.5373	0.2567	Future	6	0.2012	0.1940
Present Fatalistic	14	0.4925	0.1112	Future	10	0.1808	-0.1495
Present Fatalistic	35	0.5422	0.5374	Future	13	-0.3396	-0.4323
Present Fatalistic	37	0.4277	-0.0187	Future	18	0.5468	0.5821
Present Fatalistic	38	0.5589	0.2655	Future	21	0.1633	0.1768
Present Fatalistic	39	0.5568	0.3662	Future	30	0.4732	0.5767
Present Fatalistic	41	0.0163	-0.0397	Future	40	0.1418	0.1260
Present Fatalistic	47	-0.1394	-0.1067	Future	43	0.5304	0.4018
Present Fatalistic	52	0.4795	0.2919	Future	45	-0.0177	-0.1286
Present Fatalistic	53	-0.1412	-0.1232	Future	51	0.1550	-0.0788

Table 1. 2010 Model, ZTPI Measurement Variables, Under Partial Least Squares

Less than half of the average variance for each factor is explained, with the exception of the intent items. This indicates that the measurement items in these scales exhibits only moderate convergent validity and are highly correlated to each other due to a single underlying construct. Chin (1998) and Höck and Ringle (2006) considered a composite reliability of 0.6 or greater to be adequate for an exploratory model. The average variance explained substantially increased with the TPIF scales, and composite reliability also materially increased, indicating that some tailoring

of scale items is an improvement over the general scale items in this case. Except for the past negative scale (which was *not* tailored), each of the TPIF reliability statistics exceeded the recommended value of 0.60.

Factor	Item	Factor	Weight	Factor	Item #	Factor	Weight
	#	Loading	0			Loading	0
Intent – Move Job	74	0.8982	0.4434	Past Negative	4	0.1464	0.0683
Intent – Move Job	75	0.8088	0.3422	Past Negative	5	-0.1155	-0.0623
Intent – Move Job	76	0.8217	0.3955	Past Negative	16	-0.0775	-0.0677
Present Hedonist New	81	0.9710	0.1626	Past Negative	22	-0.1160	-0.1041
Present Hedonist New	83	0.9744	0.1653	Past Negative	25	-0.0551	-0.0509
Present Hedonist New	88	0.8397	0.1497	Past Negative	27	0.6802	0.6500
Present Hedonist New	90	0.9704	0.1590	Past Negative	33	0.6796	0.6630
Present Hedonist New	92	0.7376	0.1146	Past Negative	34	-0.0311	-0.0298
Present Hedonist New	93	0.8366	0.1255	Past Negative	36	-0.1232	-0.0690
Present Hedonist New	96	0.7036	0.1120	Past Negative	50	0.2902	0.1824
Present Hedonist New	98	0.7921	0.1675	Past Negative	54	-0.0660	-0.1141
Present Fatalist New	89	0.8033	0.3639	Future New	82	0.9544	0.1600
Present Fatalist New	94	0.9088	0.3021	Future New	85	0.5989	0.0728
Present Fatalist New	95	0.8975	0.4825	Future New	86	0.9605	0.1542
Past Positive New	84	1.0000	1.0000	Future New	87	0.8211	0.1195
				Future New	91	0.9589	0.1525
				Future New	97	0.9302	0.1156
				Future New	99	0.9283	0.1189
				Future New	100	0.9296	0.1207
				Future New	101	0.8268	0.0979

Table 2. 2010 Mode	l, TPIF Measurement	Variables Using	Partial Least Squares
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Table 3 compares the average variance explained and the composite reliability for both the 2010 ZTPI items and the 2010 TPIF items. The TPIF, financially-tailored scales explained more variance and were more reliable than the ZTPI measures.

Table 3. Two-Model Comparison of Common Variance Explained and Composite Reliabi	ility
Measures, 2010 Data	-

Construct	Average Variance Explained, General ZTPI Items	Average Variance Explained, TPIF Items	Composite Reliability, ZTPI Items	Composite Reliability, TPIF Items
Intent – Change Jobs	0.711	0.712	0.881	0.881
Past Positive*	0.162	1.000	0.470	1.000
Past Negative**	0.099	0.099	0.363	0.364
Present Hedonistic	0.092	0.738	0.400	0.957
Present Fatalistic	0.190	0.759	0.652	0.904
Future	0.106	0.785	0.458	0.970

The correlations among these tailored latent variables are presented in Table 4; the numbers presented in the diagonal depict the square root of the average common variance extracted by the

measurement items within the scale (the average inter-item correlation). The correlations among the latent variables are smaller than the square root of the common variance extracted within each scale - with the exceptions of the future TPIF, which correlates more highly with both the new constructs for present-hedonistic and present-fatalistic – demonstrating an overall divergent validity where the items within a scale are more significantly related to one another than to items in other scales. Present-hedonistic and present-fatalistic are also highly correlated with one another. Based on the preceding results, the measurements exhibit moderate validity and reliability, but could be improved.

Construct	Intent to	New Past	Past	New	New	New
	Change	Positive	Negative	Present	Present	Future
	Job			Hedonistic	Fatalistic	
Intent to Change Job	0.844					
New Past Positive	0.217	1.000				
Past Negative	0.500	-0.031	0.315			
New Present Hedonistic	0.374	0.686	-0.021	0.859		
New Present Fatalistic	0.409	0.586	0.179	0.889	0.871	
New Future	0.320	0.673	-0.037	0.968	0.904	0.886

Table 4. 2010 TPIF Item Model Correlations among Latent Variables

The path coefficients to the dependent variables from the latent variables are presented in Figures 2 and 3. In the General Model, two path coefficients are significant at $p \le 0.05$, but only one of those paths is above 0.20: Recalling the hypotheses:

H₃: A strong present-hedonistic orientation will have a *negative* effect on the intent to change jobs.



Figure 2 – 2010 ZTPI Model Using Partial Least Squares

In the TPIF Model, two path coefficients are significant at $p \le 0.05$, and a third is marginally significant at $p \le 0.10$ and all of those paths are above 0.20:

- H₂: A strong past-negative orientation will have a *positive* effect on intent to change jobs.
- H₃: A strong present-hedonistic orientation will have a *negative* effect on the intent to change jobs.
- H₅: A strong future orientation is expected to have a *negative* effect on intent to intent to change jobs.





Refining the Scales and using 2012 Data

While the TPIF scales worked better than the ZTPI scales in 2010, the researchers postulated that by improving the TPIF scales, more path coefficients would be significant. Consequently, several new items were developed and tested, as shown in Appendix D. The best scale items from 2012 overall are conceptually aligned with the ZTPI scale, shown in Table 5.

Comparing the two scales shows mixed results. (See Table 6, where the preferred scale results are highlighted.) Both Past-Positive and Past-Negative scales are improved, but the original Present Hedonistic, Present Fatalistic and Future scales were not. While the composite reliability is adequate under both scales, the average variance explained in those scales dropped below 0.50, indicating a marked worsening in those scales. Further, while the average variance explained (AVE) was improved for both Past Positive and Past Negative scales, the refinement process should continue until those scale AVEs at least equal 0.50. Note that the Intent scale did not change across years, and differences in average variance explained and composite reliability in scale results between the years are negligible.

Factor	Item	Factor	Weight	Factor	Item #	Factor	Weight
	#	Loading				Loading	
Intent – Move Job	58	0.8026	0.4071	Past Negative	4	0.0357	0.0308
Intent – Move Job	59	0.7803	0.3990	Past Negative	16	0.2561	0.1650
Intent – Move Job	60	0.8293	0.4364	Past Negative	26	0.2417	0.0668
Present Hedonist	8	-0.0653	-0.0382	Past Negative	33	0.7404	0.4282
Present Hedonist	12	0.1727	0.0848	Past Negative	49	0.7095	0.4447
Present Hedonist	22	0.3683	0.1584	Past Negative	53	0.7183	0.4286
Present Hedonist	41	0.6810	0.2982	Future	10	0.2808	0.1133
Present Hedonist	43	0.6751	0.3229	Future	39	0.5384	0.2233
Present Hedonist	45	0.7096	0.3865	Future	42	0.6787	0.3430
Present Hedonist	54	0.6803	0.3368	Future	44	0.7943	0.3990
Present Fatalist	36	0.6259	0.3372	Future	50	0.7820	0.3813
Present Fatalist	37	0.6648	0.3447	Past Positive	11	0.2430	0.0342
Present Fatalist	38	0.7429	0.3901	Past Positive 19		0.5792	0.3552
Present Fatalist	46	0.6652	0.4059	Past Positive	24	0.2730	0.0874
				Past Positive	40	0.9191	0.8292

Table 5. 2012 TPIF2 Measurement Variables Using Partial Least Squares

Table 6. Two-Scale Comparison of Common Variance Explained and Composite

Reliability Mea	sures, TPIF Items	s, 2010 and TPIF	2 Items, 2012

Construct	Average Variance Explained, 2010 Items	Average Variance Explained, 2012 Items	Composite Reliability, 2010 Items	Composite Reliability, 2012 Items
Intent – Change Jobs	0.712	0.647	0.881	0.846
Past Positive	1.000	0.382	1.000	0.602
Past Negative	0.099	0.282	0.364	0.629
Present Hedonistic	0.738	0.294	0.957	0.694
Present Fatalistic	0.759	0.457	0.904	0.770
Future	0.785	0.414	0.970	0.763

Evaluating the correlations among latent variables in Table 7, the 2010 correlations indicated problems among Present Hedonistic, Present Fatalistic and Future constructs, yet the 2012 scales only moderately corrected some of those problems, and new but mild problems with the Past Negative construct arose. Troublesome correlations are highlighted in Table 7.

Construct	Intent to	Past	Past	Present	Present	Future
	Change	Positive	Negative	Hedonistic	Fatalistic	
	Job					
Intent to Change Job	0.804					
Past Positive	0.210	0.572				
Past Negative	0.318	0.489	0.531			
Present Hedonistic	0.354	0.402	0.555	0.542		
Present Fatalistic	0.360	0.356	0.508	0.605	0.676	
Future	0.371	0.341	0.565	0.670	0.341	0.643

 Table 7. 2012 TPIF2 Item Model Correlations among Latent Variables

* The numbers presented in the diagonal depicting the square root of the average common variance extracted by the measurement items within the scale.

With the 2012 data, one path coefficient is significant at $p \le 0.05$, but that path is not above 0.20. Further, the overall R-squared for the model dropped to 0.195. See Figure 4.

Figure 4 – 2012 TPIF2 Results Using Partial Least Squares



DISCUSSION

The ZTPI and the two models with scales that focused on finances have results that suggested time perspective does indeed capture some predictable differences among individuals. A comparison of the models is found in Table 8.

Table 8	Comparison	of ZTPI, TPIF	and TPIF2 Models
---------	------------	---------------	------------------

		ZTPI Model		2010 TI	2010 TPIF Model		2012 TPIF2Model	
Hypothesis	Expected	Actual	Significant?	Actual	Significant?	Actual	Significant?	
	Sign	Path		Path		Path		
1	(-)	0.007	Ν	-0.050	Ν	0.017	Ν	
2	(+)	0.194	N	0.498	* * *	0.078	N	
3	(-)	0.394	* * *	0.940	**	0.109	N	
4	0	0.117	**	0.001	N	0.156	**	
5	(-)	-0.086	N	-0.539	*	0.148	N	

*** is significant at p<.01; ** is significant at p<.05; * is marginally significant at p<.10.

The 2010 ZTPI Model had an R-squared of 0.360 and only one significant path size larger than 0.200, and that path had an unexpected sign. By comparison, the 2010 TPIF Model had an R-squared of 0.418 and three path sizes larger than 0.200. Two of those path sizes were significant and one was marginally significant, although one of the two significant paths again had an unexpected sign. The 2010 TPIF Model appears to be an improvement over the 2010 ZTPI Model, although both are reasonably robust predictors of intent to move jobs in a crisis. The 2012 TPIF2 results were not an especially good predictor; by then, unemployment had not materially improved but had stabilized and was decreasing. Understandably, the economic crisis appears to have prompted an emotional, "scaredy cat" response, with people relying more on their own intuition as colored by their individual time perspectives, rather than relying on external, more rational, "cool cat" factors that one might use in more "normal" times.

In the 2010 TPIF Model, H₂ (Past Negative to Intent) is significant with a sufficient path size. Similarly, H₃, (Present Hedonistic to Intent) is significant with a robust path size under the TPIF Model; but in both models, the sign is positive instead of negative. Although this was not expected, it would make sense if cautious people saw the tenuous economic situation as a bad time to take a risk on a new job, but a carefree person did not see any danger in forging ahead. H₄, Present Fatalistic, is very close to zero, as predicted. H₅, (Future to Intent) is negative, as predicted, and marginally significant in the TPIF Model but insignificant in the ZTPI Model.

Still, further examination is in order. The scales are improving but need more improvement and further testing in times of crisis. The reasons why and at what point a person begins to rely heavily on time perspective in making a job or career decision, and whether the shift to greater reliance on time perspectives happens suddenly or very gradually, require further study. Although one does

not wish for an economic downturn or other crisis to study the shift to "scaredy-cat" decisionmaking, that appears to be the best opportunity for continuing this line of research.

LIMITATIONS AND FUTURE DIRECTIONS

This study was limited to examining individual responses to a general financial crisis, with three samples, over a four year period. The first iteration focused on only two issues related to positioning oneself for a better financial outcome in response to a major economic downturn – jobs and investing funds in safer vehicles, at a time when many of the financial experts did not have much advice to give. The second and third iterations focused only on changing jobs. The marked improvement in the economy over this four-year time period was an impediment to measuring the improvement in the survey questions, as individual decision-making appears to have moved from "scaredy cat" mode to a more normal "cool cat" mode. In order to not wait for another recession to test these measures, it might be useful to survey individuals' response to a more localized financial downturn, or a localized natural event, that affects employment or the value of assets.

CONCLUSION

The use of the ZTPI for examining a myriad of financial decisions – whether personal or acting within a firm – may hold great promise for better understanding and greater predictability of those decisions. However, this study shows that adapting the scales to a greater level of specificity to the dependent variable of interest adds predictive value, at least in this case.

Further, peoples' reliance on internal time perspectives appears to be greater in times of crisis than in more "normal" times. During crises, the stronger one's Past Negative and/or Present Hedonistic perspective, the more likely one is to change jobs. Conversely, Futurists wait out crises and are less likely to change jobs. Additional studies under differing circumstances can shed more light on the general usefulness of time perspective in this realm.

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Appendix A, 2008/2009 Data

Today's date _____

Read each item and, as honestly as you can, answer the question: "How characteristic or true is this of me?" Circle the appropriate number, using the following scale:

1 = very untrue 2 = untrue 3 = neutral 4 = true 5 = very true DK = don't know Please answer *all* the following questions.

1.	I believe that getting together with one's friends to party is one of life's important pleasures.	1	2	3	4	5	DK
2.	Familiar childhood sights, sounds, and smells often bring back a flood of wonderful memories.	1	2	3	4	5	DK
3.	Fate determines much in my life.	1	2	3	4	5	DK
4.	I often think of what I should have done differently in my life.	1	2	3	4	5	DK
5.	My decisions are mostly influenced by people and things around me.	1	2	3	4	5	DK
6.	I believe that a person's day should be planned ahead each morning.	1	2	3	4	5	DK
7.	It gives me pleasure to think about my past.	1	2	3	4	5	DK
8.	I do things impulsively.	1	2	3	4	5	DK
9.	If things don't get done on time, I don't worry about it.	1	2	3	4	5	DK
10.	When I want to achieve something, I set goals and consider specific means for reaching those goals.	1	2	3	4	5	DK
11.	On balance, there is much more good to recall than bad in my past.	1	2	3	4	5	DK
12.	When listening to my favorite music, I often lose all track of time.	1	2	3	4	5	DK
13.	Meeting tomorrow's deadlines and doing other necessary work come before tonight's play.	1	2	3	4	5	DK
14.	Since whatever will be will be, it doesn't really matter what I do.	1	2	3	4	5	DK
15.	I enjoy stories about how things used to be in the "good old times."	1	2	3	4	5	DK
16.	Painful past experiences keep being replayed in my mind.	1	2	3	4	5	DK
17.	I try to live my life as fully as possible, one day at a time.	1	2	3	4	5	DK
18.	It upsets me to be late for appointments.	1	2	3	4	5	DK
19.	Ideally, I would live each day as if it were my last.	1	2	3	4	5	DK
20.	Happy memories of good times spring readily to mind.	1	2	3	4	5	DK
21.	I meet my obligations to friends and authorities on time.	1	2	3	4	5	DK
22.	I've taken my share of abuse and rejection in the past.	1	2	3	4	5	DK
23.	I make decisions on the spur of the moment.	1	2	3	4	5	DK
24.	I take each day as it is rather than try to plan it out.	1	2	3	4	5	DK

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25.	The past has too many unpleasant memories I prefer not to think about.	1	2	3	4	5	DK
26.	It is important to put excitement in my life.	1	2	3	4	5	DK
27.	I've made mistakes in the past that I wish I could undo.	1	2	3	4	5	DK
28.	I feel it's more important to enjoy what you're doing than to get work done on time.	1	2	3	4	5	DK
29.	I get nostalgic about my childhood.	1	2	3	4	5	DK
30.	Before making a decision, I weigh the costs against the benefits.	1	2	3	4	5	DK
31.	Taking risks keeps my life from becoming boring.	1	2	3	4	5	DK
32.	It's more important for me to enjoy life's journey than to focus only on the destination.	1	2	3	4	5	DK
33.	Things rarely work out as I expected.	1	2	3	4	5	DK
34.	It's hard for me to forget unpleasant images of my youth.	1	2	3	4	5	DK
35.	It takes joy out of the process and flow of my activities if I have to think about goals, outcomes, and products.	1	2	3	4	5	DK
36.	Even when I am enjoying the present, I am drawn back to comparisons with similar past experiences.	1	2	3	4	5	DK
37.	You can't really plan for the future because things change so much.	1	2	3	4	5	DK
38.	My life path is controlled by forces I cannot influence.	1	2	3	4	5	DK
39.	It doesn't make sense to worry about the future, since there is nothing that I can do about it anyway.	1	2	3	4	5	DK
40.	I complete projects on time by making steady progress.	1	2	3	4	5	DK
41.	I find myself tuning out when family members talk about the way things used to be.	1	2	3	4	5	DK
42.	I take risks to put excitement in my life.	1	2	3	4	5	DK
43.	I make lists of things to do.	1	2	3	4	5	DK
44.	I often follow my heart more than my head.	1	2	3	4	5	DK
45.	I am able to resist temptations when I know that there is work to be done.	1	2	3	4	5	DK
46.	I find myself getting swept up in the excitement of the moment.	1	2	3	4	5	DK
47.	Life today is too complicated; I would prefer the simpler life of the past.	1	2	3	4	5	DK
48.	I prefer friends who are spontaneous rather than predictable.	1	2	3	4	5	DK
49.	I like family rituals and traditions that are regularly repeated.	1	2	3	4	5	DK
50.	I think about the bad things that have happened to me in the past.	1	2	3	4	5	DK

51.	I keep working at difficult, uninteresting tasks if they will help me get ahead.	1	2	3	4	5	DK
52.	Spending what I earn on pleasures today is better than saving for tomorrow's security.	1	2	3	4	5	DK
53.	Often luck pays off better than hard work.	1	2	3	4	5	DK
54.	I think about the good things that I have missed out on in my life.	1	2	3	4	5	DK
55.	I like my close relationships to be passionate.	1	2	3	4	5	DK
56.	There will always be time to catch up on my work.	1	2	3	4	5	DK
57.	In Fall 2007 I felt that my savings in a bank were secure.	1	2	3	4	5	DK
58.	In Fall 2007 I felt that my investment funds (stocks & bonds) were secure.	1	2	3	4	5	DK
59.	In Fall 2007 I felt that my job (source of income) was secure.	1	2	3	4	5	DK
60.	In August 2008 I felt that my savings in a bank were secure	1	2	3	4	5	DK
61.	In August 2008 I felt that my investment funds (stocks & bonds) were secure.	1	2	3	4	5	DK
62.	In August 2008 I felt that my job (source of income) was secure.	1	2	3	4	5	DK
63.	Today I feel that my savings in a bank is secure.	1	2	3	4	5	DK
64.	Today I feel that my investment funds (stocks & bonds) are secure.	1	2	3	4	5	DK
65.	Today I feel that my job (source of income) was secure.	1	2	3	4	5	DK
66.	As a result of changes in the economy many of my relatives are moving their financial assets from financial markets into banks.	1	2	3	4	5	DK
67.	As a result of changes in the economy many of my relatives are moving their financial assets from financial assets into cash.	1	2	3	4	5	DK
68.	As a result of changes in the economy many of my relatives are looking for a new job	1	2	3	4	5	DK
69.	As a result of changes in the economy many of my relatives are retiring.	1	2	3	4	5	DK
70.	As a result of changes in the economy many of my relatives are training for a new job.	1	2	3	4	5	DK
71.	As a result of changes in the economy many of my relatives are - 	1	2	3	4	5	DK
72.	As a result of how I feel now, I intend to move my financial assets from financial markets into banks.	1	2	3	4	5	DK

73.	As a result of how I feel now, I intend to move my financial assets from financial assets into cash.	1	2	3	4	5	DK
74.	As a result of how I feel now, I intend to look for a new job.	1	2	3	4	5	DK
75.	As a result of how I feel now, I intend to retire.	1	2	3	4	5	DK
76.	As a result of how I feel now, I intend to train for a new job.	1	2	3	4	5	DK
77.	As a result of how I feel now, I intend to	1	2	3	4	5	DK
	(Please specify and state extent to which it is true.)						
78.	I have the power to improve my current financial situation.	1	2	3	4	5	DK
79.	. I understand what is going on in the economy.					5	DK
80.	0. I understand what is going on in the financial markets.					5	DK
80.	I understand what is going on in the financial markets.	1	2	3	4	5	DK

DEMOGRAPHICS: Circle the number that corresponds to the category that best describes you:

Sex: 1. Male	2. Female	Age at last birthday	Zip code
I own my own b	ousiness. 1. Yes	2. No I'm a partne	er in a business. 1. Yes 2. No
I do independer	it consulting worl	k. 1. Yes 2. No	
I work in		inc	dustry
Currently takin	g college classes?	1. Yes 2. No	
Your major (co	llege students onl	y)	
Current househ	old monthly inco	me (approximately) _	
Approximate de	ollar value of you	r financial assets (savi	ngs, investments etc.)?
1. less than 25,	000 8.	175,000-199,999	15. 350,000 - 374,999
2. 25,000-49,9	99 9.	200,000-224,999	16. 375,000 – 399,999
3. 50,000- 74,9	99 10. 2	225,000- 249,999	17. 400,000 – 424,999
4. 75,000-99,9	99 11.	250,000 - 274,999	18. 425,000 - 449,999
5. 100,000- 124	4,999 12. 2	275,000 – 299,999	19. 450,000 - 474,999
6. 125,000-14	9,999 13. 3	300,000 - 324,999	20. 475,000 - 499,999
7. 150,000-174	4,999 14.	325,000 - 349,999	21. 500,000 +
IN PERCENTA (must add up to	GES, how your <u>f</u> 100%)	<u>inancial assets</u> are dis	tributed among the following?
1. Checking acco	ounts	2. Savings ac	ecounts
3. Stocks/bonds/	mutual funds	4. Retiremen	t/pension funds

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5. Other (ple	ease specify)		
IN PERCENTAGE (must add up to 10	CS, how your <u>1</u> 0%)	<u>eal assets</u>	are distribı	ited among th	e following?	
1. Home	2. Vehic	eles	3. Ot	her real estate		
4. Personal property	y (furniture, to	ols electron	ics, jewelry	, etc.)		
5. Other	_ (please spec	cify:))
Highest level of edu	icational attai	nment:	1. Less that	n high school	2. High sch	ool/GED
3. Some college Masters degree	4. Bachelors	degree	5. Masters	degree	6.	Above
What is the subject	t area is your	highest deş	gree (colleg	e graduates or	nly)?	
I would classify my	business exp	erience lev	el as:			
1. Very Low	2. Low	3. Avera	ige	4. High	5. Very High	
What is your Racia	ll/ethnic ident	ity?				
1. African Americar	a 2. As	sian Ameri	can	3. Hispanic	American	
4. Native American	5. W	hite Ameri	can			
What is your religi	ous affiliation	?				
1. Catholic	2. Protestants	(all Christ	ian denomir	nations that are	not Catholic)	
3. Jewish	4. Muslim	5. Athei	st			
6. Other (please spec	cify)					
How many times d	o you pray (oi	n your own	ı) weekly? _			
How many times d	o you attend a	religious	activity (ch	urch etc)?		
How important is r	eligion in you	r personal	decisions?			
1. Very unimportan	t 2. Unimpo	ortant 3	3. Important	4. Very Im	portant	
How would you des	scribe yoursel	f politically	y?			
Very Liberal		Mod	lerate	Ver	y Conservative	
1 2	2 3	2	1 5	5 6	7	

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Appendix B, Results for ZTPI with the 2008/2009 Data

Approximately 458 members of a South Texas university community (including students, faculty members, and administrators/staff) participated in this study, producing 451 usable responses for the 2008/2009 Model. Data were collected through surveys that included only a few open-ended questions. Respondents from each of the categories (students, faculty members and administrators/staff) were selected both purposefully and on the basis of convenience. This means, for example, professors teaching classes of at least 60 students were more likely to be solicited for permission to administer the surveys in their classes than those with smaller classes.

Care was taken, nevertheless, to ensure that participating students were distributed from freshmen through graduates. Similar care was exercised to ensure that every college in the university was represented, in terms faculty and staff participation. The university's administrative offices were specifically targeted to ensure the inclusion of senior administrative personnel in the sample. Unlike those distributed to students, and faculty, staff and administrators' questionnaires were mailed with two separate return, self-addressed envelopes for separately returning the questionnaires and Informed Consent Forms. Overall, the sample reflects the general demographic distribution of the university.

Results Summary of the 2008/2009 ZTPI Model

The median age of the participants was 23 years, with a range from 16 to 71. Fifty-nine percent of the participants were female. Respondents' experience varied from very little perceived business experience to extensive business experience, with the average participant's self-rating as an experience level of 3.0 on a 5-point scale, similar to national averages. Household income was at least \$2,000 per month for approximately 71 percent of the respondents, and the average monthly income was \$4,818.

2008/2009 Model

The results of the confirmatory factor analysis suggest that the measurement items within each scale are only moderately correlated with the underlying latent variable. Less than half of the average variance for each factor is explained, with the exception of the two intent items. This indicates that the measurement items in these scales exhibits only moderate convergent validity and are highly correlated to each other due to a single underlying construct. "In an adequate model for exploratory purposes, composite reliabilities should be greater than 0.6" (Chin, 1998; Höck and Ringle, 2006). The average variance explained is summarized in Table B2, along with the results of composite reliability tests for each of the scales. Except for the Future construct, each of the reliability statistics generally approaches or exceeds the 0.60 recommended by Chin (1998) and Höck and Ringle (2006). Table B3 shows the correlations among the latent variables; the numbers presented in the diagonal depict the square root of the average common variance extracted by the measurement items within the scale (the average inter-item correlation). Based on the results, the measurements exhibit moderate validity and reliability. The path coefficients to the dependent variables from the latent variables are presented in Figure 1B with commentary.

Three path coefficients are significant at $p \le 0.05$, and of the expected signs for supporting ZTPI construct hypotheses: A strong past-positive to Intent to Move Job is negative.

- A strong past-negative to Intent to Move Job is positive.
- > A strong present-fatalistic to Intent to Reallocate Assets is negative.

The negative effect of strong Present-Fatalistic orientation is significant; however a positive sign, not a negative one was predicted. See Figure 1B. Of the two time perspectives for which no effect was expected, that was indeed the outcome:

- > A strong past-negative orientation had *no* effect on intent to move funds.
- A strong present-fatalistic orientation had *no* effect on the intent to change jobs.

The path, representing Future orientation to the intent to reallocate assets, approached significance, with $p \le 0.0635$, and it had the expected, negative sign. All other paths, representing hypotheses, were insignificant.

Figure B1 – 2008/2009 Model Structural Model Using Partial Least Squares



- * Marginally significant at p = 0.0635
- ** Significant at p ≤ 0.050 .

An overall absolute value of a path coefficient for the dependent variable that is greater than 0.20 is considered meaningful (Chin, 1998). One path, from Future to Intent to Reallocate Assets, was greater than 0.20, and two paths approached this size: the path from Present Fatalistic to Intent to Reallocate Assets and the path from Present Hedonistic to Intent to Reallocate Assets. Only (1) the pathway from Past Negative orientation and (2) and pathway from Past Positive orientation were significant, with p < 0.05.

The amount of variance in the dependent variables explained by Model 1 is represented by the squared multiple correlations of 0.109 for intent to change jobs and 0.215 for intent to reallocate assets. That is, taken as a set, these constructs explained about one-tenth and one-fifth of the total

behavior, respectively. Chin (1998) and Höck and Ringle (2004) consider a cut-off of 0.33 to be moderate evidence, and a cut-off of 0.19 to be weak substantiation, respectively.

Of the control variables, the path from age to moving jobs was significant and negative, but the path size was -0.189, indicating that older individuals were less likely to change jobs. This could reflect loyalty to their current company, or a perceived disadvantage (age discrimination) in the work place.

Factor	Item	Factor	Weight	Factor	Item #	Factor	Weight
	#	Loading				Loading	
Intent-Reallocate Assets	71	0.8264	0.5095	Past Positive	2	0.5970	0.2502
Intent-Reallocate Assets	72	0.9085	0.6788	Past Positive	7	0.7389	0.2819
Intent - Move Job	73	0.9003	0.7158	Past Positive	11	0.7619	0.3859
Intent – Move Job	74	0.3577	0.1933	Past Positive	15	0.3788	0.0851
Intent – Move Job	75	0.7910	0.3967	Past Positive	20	0.7359	0.2915
Present Hedonistic	1	0.2867	0.0820	Past Positive	29	0.2308	0.0039
Present Hedonistic	8	0.4690	0.1282	Past Positive	49	0.4950	0.2090
Present Hedonistic	9	0.0187	-0.0380	Past Negative	4	0.5225	0.0530
Present Hedonistic	12	0.2415	0.0118	Past Negative	5	0.3110	0.0937
Present Hedonistic	17	0.5906	0.2071	Past Negative	16	0.7764	0.1716
Present Hedonistic	19	0.4944	0.0987	Past Negative	22	0.5720	0.1748
Present Hedonistic	23	0.4295	0.0428	Past Negative	25	0.7114	0.2181
Present Hedonistic	24	0.2402	-0.0076	Past Negative	27	0.4929	0.1157
Present Hedonistic	26	0.5952	0.1387	Past Negative	33	0.4785	0.1184
Present Hedonistic	28	0.1667	-0.0670	Past Negative	34	0.7598	0.2239
Present Hedonistic	31	0.6652	0.1618	Past Negative	36	0.4447	0.0427
Present Hedonistic	32	0.5223	0.1488	Past Negative	50	0.7882	0.1744
Present Hedonistic	42	0.6991	0.1798	Past Negative	54	0.6859	0.1728
Present Hedonistic	44	0.4876	0.2110	Future	6	0.0161	-0.1054
Present Hedonistic	46	0.6819	0.1889	Future	10	0.3588	0.1802
Present Hedonistic	48	0.5172	0.1691	Future	13	0.2264	0.1224
Present Hedonistic	55	0.3864	0.0837	Future	18	0.5456	0.3379
Present Hedonistic	56	0.0043	-0.1551	Future	21	0.5756	0.4519
Present Fatalistic	3	0.3385	0.1148	Future	30	0.5113	0.3710
Present Fatalistic	14	0.5837	0.1451	Future	40	-0.2131	-0.3926
Present Fatalistic	35	0.4643	0.1404	Future	43	0.0832	-0.0755
Present Fatalistic	37	0.5980	0.2345	Future	45	0.1260	0.0760
Present Fatalistic	38	0.6280	0.2730	Future	51	-0.3918	-0.4852
Present Fatalistic	39	0.6752	0.2968				
Present Fatalistic	41	0.4277	0.2191				
Present Fatalistic	47	0.1576	0.0360				
Present Fatalistic	52	0.4724	0.1329				
Present Fatalistic	53	0.5737	0.2429				

Table B1. 2008/2009 Model, ZTPI Variables Using Primary Least Squares

Construct	Average Variance Explained	Composite Reliability
Intent – Reallocate Assets	0.754	0.860
Intent - Move Job	0.521	0.745
Past Positive	0.352	0.774
Past Negative	0.377	0.862
Present Hedonistic	0.217	0.799
Present Fatalistic	0.264	0.767
Future	0.129	0.516

 Table B2. 2008/2009 Model Common Variance Explained and Composite Reliability

 Measures

Table B3. 2008/2009 Model Correlations among Latent Variables

Construct	Intend to Reallocate Assets	Intend to Move Job	Past Positive	Past Negative	Present Positive	Present Negative	Future
Intent – Reallocate Assets	0.868						
Intent - Move Job	0.233	0.722					
Past Positive	-0.189	-0.183	0.593				
Past Negative	0.143	0.233	-0.314	0.614			
Present Hedonistic	-0.210	0.118	0.267	0.080	0.466		
Present Fatalistic	0.253	0.225	-0.244	0.409	0.126	0.514	
Future	-0.409	-0.161	0.300	-0.176	0.209	-0.268	0.359

* The numbers presented in the diagonal depicting the square root of the average common variance extracted by the measurement items within the scale.

This model was more effective in predicting whether one would move money or reallocate assets than whether one would change jobs. This could be in part because one has more control over moving money; a job change requires an accommodating job market. Additionally, people did not admit to relying on past experience or teaching to adapt to the (then) present economic crisis. Their future beliefs were sizably influential, but less stable of a predictor than present indicators. All indicators were from the standard ZTPI. Many of these items are very general in nature. Had, for example, the item "I meet my obligations to friends and authorities on time" been tailored to read "I meet my financial obligations on time," a tighter, more consistent result might have been obtained.

Appendix C, Twenty-one Additional TPIF Questions for the 2010, Intent to Change Jobs

Model

Read each item and, as honestly as you can, answer the question: "How characteristic or true is this of me?" Circle the appropriate number, using the following scale:

1 = very untrue 2 = untrue 3 = neutral 4 = true 5 = very true

Please answer *all* the following questions.

81.	I believe that spending money to party with one's friends is one of life's important pleasures.	1	2	3	4	5
82.	I believe that a person's budget should be planned ahead each morning.	1	2	3	4	5
83.	If things don't get paid on time, I don't worry about it.	1	2	3	4	5
84.	It gives me pleasure to think about my savings.	1	2	3	4	5
85.	When I want to have money, I set goals and consider specific means for reaching those goals.	1	2	3	4	5
86.	Meeting tomorrow's payments and doing other necessary work comes before tonight's play.	1	2	3	4	5
87.	I believe that my future finances are well planned.	1	2	3	4	5
88.	I spend and earn in order to live my life as fully as possible one day at a time.	1	2	3	4	5
89.	It doesn't make sense to worry about future income security since there is nothing to do about it anyway.	1	2	3	4	5
90.	When I have money, I like playing and betting.	1	2	3	4	5
91.	It upsets me to be late in making payments.	1	2	3	4	5
92.	I spend impulsively and I make purchasing decisions at the moment.	1	2	3	4	5
93.	I feel that it's more important to enjoy what you're doing than to save on a schedule.	1	2	3	4	5
94.	I'm inclined to spend impulsively when feeling emotional.	1	2	3	4	5
95.	It upsets me when people who owe me money are late paying me back.	1	2	3	4	5
96.	When I go shopping I lose control over how much I spend.	1	2	3	4	5
97.	I save on schedule by making steady progress.	1	2	3	4	5
98.	I gamble to put excitement in my life.	1	2	3	4	5
99.	I write down a budget to plan my finances.	1	2	3	4	5

100.	I keep working at difficult, uninteresting tasks if they will help me get ahead financially.	1	2	3	4	5
101.	I am able to resist temptations when I know that I need to save.	1	2	3	4	5

Appendix D, 2012 TPIF2 Questions for Intent to Change Jobs Model

1. Spending money to be with one's friends is one of life's important pleasures.	1	2	3	4	5	DK
2. Memorabilia from my childhood often brings back many wonderful memories.	1	2	3	4	5	DK
3. My income and wealth determine much of my life.	1	2	3	4	5	DK
4. I often think of how I should have invested or spent my money differently.	1	2	3	4	5	DK
5. My purchases and savings are mostly influenced by people and things around me.	1	2	3	4	5	DK
6. A person's spending should be planned ahead.	1	2	3	4	5	DK
7. It gives me pleasure to think about things I've bought.	1	2	3	4	5	DK
8. I buy things impulsively.	1	2	3	4	5	DK
9. If I don't make payments on time, I don't worry about it.	1	2	3	4	5	DK
10. When I want to purchase something, I set goals and specific means to reach those goals.	1	2	3	4	5	DK
11. Overall, there is much more good than bad to recall in my past spending and/or saving.	1	2	3	4	5	DK
12. When using my favorite purchases, I often lose track of time.	1	2	3	4	5	DK
13. Meeting payment deadlines and other necessary expenses come before tonight's play.	1	2	3	4	5	DK
14. Since whatever will be will be, it doesn't really matter how I spend my money.	1	2	3	4	5	DK
15. I enjoy stories about how inexpensive things used to be in the "good old times."	1	2	3	4	5	DK
16. Regrets about past purchases and investments keep being replayed in my mind.	1	2	3	4	5	DK
17. It upsets me to be late in making payments.	1	2	3	4	5	DK
18. Ideally, I would spend money each day as if it were my last.	1	2	3	4	5	DK
19. Happy memories of making good deals on my purchases spring readily to mind.	1	2	3	4	5	DK
20. I meet my obligations and make my payments on time.	1	2	3	4	5	DK

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21. I've had my share of bad jobs and unemployment in the past.	1	2	3	4	5	DK
22. I make spending decisions on the spur of the moment.	1	2	3	4	5	DK
23. I spend my money as it comes in rather than trying to plan my spending.	1	2	3	4	5	DK
24. The past has too many unpleasant memories of not having enough money that I prefer not to think about.	1	2	3	4	5	DK
25. It is important to spend money to add excitement to my life.	1	2	3	4	5	DK
26. I've made mistakes in the past with my money that I wish I could undo.	1	2	3	4	5	DK
27. I feel it's more important to enjoy your money today rather than save it for later.	1	2	3	4	5	DK
28. I get nostalgic about all the things I had during my childhood.	1	2	3	4	5	DK
29. Before making a purchase, I weigh the costs against the benefits.	1	2	3	4	5	DK
30. Taking risks with my money keeps my life from becoming boring.	1	2	3	4	5	DK
31. It's more important for me to enjoy spending than to focus on only what I am accumulating.	1	2	3	4	5	DK
32. I rarely stay within my budget.	1	2	3	4	5	DK
33. It's hard for me to forget unpleasant images related to money issues from my youth.	1	2	3	4	5	DK
34. It takes joy out of having money if I think about finances, savings, and goals.	1	2	3	4	5	DK
35. When I spend money, I am drawn back to comparisons with similar past purchases.	1	2	3	4	5	DK
36. You can't really plan for future expenses and needs because things change so much.	1	2	3	4	5	DK
37. My income is controlled by forces I cannot influence.	1	2	3	4	5	DK
38. It doesn't make sense to worry about having enough money in the future, since there is nothing I can do about it anyway.	1	2	3	4	5	DK
39. I reach my financial goals on schedule by making steady progress.	1	2	3	4	5	DK
40. I find myself tuning out when family members talk about the way their finances used to be.	1	2	3	4	5	DK
41. I make risky investments to put excitement in my life.	1	2	3	4	5	DK
42. I make budgets and lists of my anticipated expenses.	1	2	3	4	5	DK
43. I often spend money based on my heart more than my head.	1	2	3	4	5	DK

44.	I am able to resist temptations when I know there is a need to save money	1	2	3	4	5	DK
45.	When I spend money, I find myself getting swept up in the excitement of the moment.	1	2	3	4	5	DK
46.	Finances today are too complicated; I would prefer the simpler choices of the past.	1	2	3	4	5	DK
47.	I prefer friends who spend spontaneously rather than predictably.	1	2	3	4	5	DK
48.	I like to spend money to continue family traditions.	1	2	3	4	5	DK
49.	I think about the bad financial circumstances that have hurt me in the past.	1	2	3	4	5	DK
50.	I stick to a budget if it will help me get ahead.	1	2	3	4	5	DK
51.	Spending what I earn on pleasures today is better than saving for tomorrow's security.	1	2	3	4	5	DK
52.	Often luck pays off better than hard work.	1	2	3	4	5	DK
53.	I think about the financial opportunities I have missed out on in my life.	1	2	3	4	5	DK
54.	I like to surprise those close to me with gifts.	1	2	3	4	5	DK
55.	There will always be time to invest and save money.	1	2	3	4	5	DK
56.	As a result of how I feel now, I intend to move my financial assets from financial markets into banks.	1	2	3	4	5	DK
57.	As a result of how I feel now, I intend to move my financial assets from financial assets into cash.	1	2	3	4	5	DK
58.	As a result of how I feel now, I intend to look for a new job.	1	2	3	4	5	DK
59.	As a result of how I feel now, I intend to retire.	1	2	3	4	5	DK
60.	As a result of how I feel now, I intend to train for a new job.	1	2	3	4	5	DK