The Decision to Retire Early: An Investigation of Faculty in the Canadian Higher Education System

Dannie L. Brown*

Large numbers of the general population and university professors are entering the retirement stage of their life and universities could experience difficulty in retention and recruitment of professors in the coming years. In this study I examined the antecedents that predict which professors, in a mandatory environment, will decide to retire voluntarily before 65. Vroom’s expectancy theory model, Schlossberg’s (1995) 4-S model (e.g. life satisfaction) and the concept of job satisfaction were used as the basis for this research. The results clearly indicated that Job Satisfaction, Economic Status, Flexible time with family, and Time for leisure activities were statistically significant predictors for voluntary retirement before 65.

JEL Codes: J26, M12, M51, M54

1. Introduction

When Canada’s oldest baby boomers turn 65 in the year 2012 it could mean over 400,000 retirees in Canada, some of whom would be retiring from Canada’s institutions of higher learning. Add to that the possibility that not all faculty wish to work until age 65. Many are taking early retirement and are not choosing to work until the mandatory age of retirement.

University administrators need to know how many possible retirees they will have every year, and especially so in the next few years. While many universities are tracking this information with more certainty recently, there are still many concomitant questions that need to be answered. What factors contribute to a professor’s decision to retire voluntarily? Will universities be able to stem the tide of early retirees; retaining current tenure track professors until they reach 65? What programs will need to be implemented to deal with the changing demographics of the professoriate on college and university campuses? Dorfman (2002) reported that, “most of the professors who continued to work said they did so mainly because they enjoyed their work (77%) and because they thought it was important to continue that work (35%)” (p. 23). How does the concept of job satisfaction in general and job satisfaction specifically in the post-secondary arena, contribute to the decision to retire voluntarily, if at all? The findings of this research are different because they represent the opinions of professors who have not yet retired. Previous research surveyed professors who had already retired. The findings differ from previous research also in that the results are from professors who were still functioning under a mandatory retirement environment.

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This paper is organized as follows. The next section establishes the theoretical foundation used in establishing the model under investigation. An explanation of the development of the survey instrument that was used follows. The findings are presented next and the paper concludes by presenting the practical implications of the findings, and statements concerning the limitations of the study and recommendations for future research.

2. Literature Review

Hiebert (2001) reported that Canadian “universities will have to hire 32,000 new professors before 2012.” Frank (2000) reported that while Canadian universities will “need to hire almost 3,000 [professors] a year . . . Canada produces only about 1,400 PhD graduates a year who end up in academic careers . . .” (p.8). The result is a predicted annual shortfall of over 1600 professors (See also Hiebert, 2001).

A study by the Maritime Provinces Higher Education Commission (MPHEC, 2002) stated that an average of 181 professors would need to be hired in the Maritimes (New Brunswick, Nova Scotia and Prince Edward Island) in the 10 years following the research, but that of the 120 PhDs who will graduate from the region, only 42 will enter academic careers; resulting in stiff competition for graduates from the rest of Canada, North America and beyond.

In a Statistics Canada report authored by MacKenzie and Dryburgh (2003), they reported that, “Education stands out as the industry with the highest rate of retirement in 1999 and the clearest indications of a rising retirement trend in the near future” (p. 9). Further, they reported that, “demographic analyses indicate that approximately half the employees in this industry will retire within 12 years” (p. 9).

2.1 Theoretical Foundation

2.1.1 Expectancy Theory

Vroom’s (1964) expectancy theory or V-I-E Theory as it is also referred to, is the conceptual framework in this research. It was coupled with “job satisfaction” as described by authors such as Locke (1968, 1969). The V-I-E acronym in expectancy theory stands for Valence-Instrumentality- and-Expectancy. Locke (1975) said that expectancy theory was “probably the most popular theory of work motivation among organizational scientists” (p. 132). Vroom (1964) said his theory assumes that “. . . the choices made by a person among alternate courses of action are lawfully related to psychological events occurring contemporaneously with the behavior” (p. 133).

Vroom (1964) described valence as “the affective (emotional) orientations people hold with regard to outcomes,” and that valence is referred to as being positive if a person would prefer having the outcome as opposed to not having the outcome. It is referred to as being negative if a person would prefer to not have the outcome as opposed to having it.

Instrumentality is when “an outcome is positively valent if the person believes that it holds high instrumentality for the acquisition of positively valent consequences (goals or other outcomes), and the avoidance of negatively valent outcomes. It helps to explain what determines the valence of a particular outcome” (Pinder, 1984, p. 135).
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*Expectancy*, the third component of Vroom’s (1964) model, “is the strength of a person’s belief about whether a particular outcome is possible”. He defined it “as a momentary belief concerning the likelihood that a particular act will be followed by a particular outcome [and] may be described in terms of their strength” (p. 17).

The expectancy theory model used in this research is a conceptual refinement of the work of Parker and Dyer (1976) and Bleicken (1990). The resulting score (Dependent Variable) is “P”. “P” was calculated by subtracting $F_e$ from $F_r$ where $F_r$ = force to choose (desirability of) “retirement voluntarily before 65” role; and $F_e$ = force to choose (desirability of) “continue to work until 65” role.

### 2.1.2 Job Satisfaction

The second component of the theoretical framework, Job Satisfaction, is related to Vroom’s Expectancy Model. Locke (1969) defined job satisfaction as “a function of the perceived relationship between what one wants from one’s job and what one perceives it as offering” (p. 316). This certainly indicates an element of valence and instrumentality. Mitchell (1974) said that Vroom’s model “has been applied most frequently to the prediction of job satisfaction . . .” (p. 1054) and that in a meta-analysis of studies using Vroom’s model he found that “the more accurately the investigation reflected the original Vroom model, the better the results”, leading him to the conclusion that Vroom’s “model has predictive utility” (p. 1058). That predictive utility is one of the reasons this research will be utilizing Expectancy Theory.

This research seeks to determine if Job Satisfaction is an appropriate predictor for a decision to retire voluntarily before 65. Previous research has identified Job Satisfaction as a variable in the decision to retire (Dunkl, 1997; Clark & Hammond, 1999). Bhushan (2005) said that in order to measure job satisfaction accurately, the measurement instrument must be reliable. For the purposes of this study, the aJDI (abridged Job Descriptive Index) from Bowling Green State University is being used; a study that has been tested many times and has strong reliability and validity (Stanton, Sinar, Balzer, Julian, Thoresen, Aziz, Fisher & Smith, 2001).

### 2.1.3 Life Satisfaction

The third component to bring structure to the conceptual framework is rooted in Schlossberg’s (1995) 4S System’s (or Transitional) Model relating to Life Satisfaction. This model has been used to determine factors that influence professors’ decisions to retire and their ability to transition from employment to retirement. The model has been used pre-, during-, and post-transition. The four “Ss” of the Schlossberg model are:

**The Situation variable:** Each individual has a unique situation. For example, did the professor retire voluntarily or was he forced out by mandatory retirement? Did health play a part in the decision?

**The Self variable:** Characteristics of the self. How important is work in the life of the professor? How closely is his identity tied to what he does?

**The Support variable:** Characteristics of support. Feeling positive about himself. Did he experience help from employers regarding the transition to retirement?
The Strategies variable: Dealing with coping strategies such as receiving additional training. Seeing retirement as an opportunity for a freer schedule, and having the opportunity to relax and be engaged in hobbies.

Much research exists that describes the relationship between Job Satisfaction and Life Satisfaction (Rice, McFarlin, Hunt & Near, 1985; Judge & Watanabe, 1993; and Judge, Locke, Durham & Kluger, 1998). Job Satisfaction and the variables related to Schlossberg’s 4-S System’s Model are expected to be among the reasons predicting the likelihood that a professor will choose to retire voluntarily before the age of 65.

The purpose of this research was to determine what factors influence professors’ decisions to retire before the mandatory age of 65. There are many intrinsic and extrinsic motivators that can affect a professor’s decision to retire (Dorfman, 2002). This research attempted to determine what those motivators were.

3. Methodology and Model

An online survey (e.g. WebSurveyor™) was used for the purposes of this study. More and more researchers are realizing the benefits of administering surveys online (Cook, Heath, & Thompson, 2000; Couper, 2000; Couper, Traugott, & Lamia, 2001; Epstein & Klinkenberg, 2001; Fricker & Schonlau, 2002; Lenert & Skoczen, 2002; Raziano, Jayadevappa, Valenzula, Weiner, & Lavizzo-Mourey, 2001; Simsek & Veiga, 2001; Stanton, 1998; Stanton & Rogelberg, 2001). This survey differs from Bleicken's (1990) survey because it adds the element of Schlossberg's 4-S Model to the aspect of what influences professors to retire early (e.g. life satisfaction); thus improving upon previous research. Some of the questions employed the seven point Likert-style scale response pattern as an instrument. Other questions were phrased to represent demographic information of the respondents.

All English language universities and some colleges in Atlantic Canada were asked to participate in this research. Control for age of the professors was accomplished by including a demographic question for the “Year” of their birth. This allowed for “within” and “between” comparisons of the baby boomers with other generations. The number of surveys sent out was 3151, with 369 respondents; 218 male and 151 female, resulting in a response rate of 11.7 percent.

The dependent variable for this research was the resultant “P” score calculated using the Expectancy Theory Model as described in detail above. In addition, a proxy for “P”, “Likelihood of Decision to Retire Voluntarily before the age of 65”, was used because less than 60 percent (58.8) of respondents completed the section necessary to calculate “P” properly. The independent variables identified for this research were: level of education attained (i.e. Ph.D.), professorial rank (e.g. assistant professor), year born, gender, marital status, self-health status, health status of significant other, time for leisure activities, more time with family, level of research productivity over the last five years, level of economic status, and job satisfaction. Marital status, health status of the respondent, health status of a significant other, time for leisure, time for family and economic status were all part of the Life Satisfaction segment in this study.
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Multiple regression was used to analyze the data and to determine the statistical relationship between and among variables using SPSS™ (the Statistical Program for the Social Sciences).

3.1 Operational Definitions

The following models are proposed as representations of the theories. Figure 1 is a causal model that identifies the independent variables that may contribute to a professor’s decision to retire voluntarily before the age of 65. The operational definitions of each of the 12 independent variables follow.

**Figure 1**

“Education” represented the level of formal education achieved by respondents—Bachelor degree, Masters degree, Doctorate or Post-Doc degree.

“Rank” represented those tenure track professors in Atlantic Canadian universities, both public and private, who held the rank of Assistant, Associate and Full Professor.

“Year Born” simply reports the year in which the respondent was born.

“Gender” was used to represent Male and Female for each respondent.

“Marital Status” was initially described with five categories but was recoded into a dichotomous variable: Married and Not Married.

“My Good Health” was used to indicate how important self-reported good health as an outcome would be, in making a decision to retire.
“Other Good Health” was used to measure how important the respondent felt the health of a significant other would be in their decision to retire.

“Leisure Time” represented the respondent’s desire for more time to pursue leisure interests and hobbies.

“Family Time” represented the respondent’s desire to spend more time with family.

“Research Record” represented the number of peer reviewed papers the professor had published or presented, and/or the number of chapters in a book that had been published within the five years previous to the study.

“Economic Status”, was used as a proxy for a respondent’s financial preparedness for retirement by asking them to estimate their total household income before taxes and their “net worth” which included the equity in their home(s), vehicles, savings and investments.

“Job Satisfaction” was used to measure the level of job satisfaction each respondent experienced at their university or college.

The second model (Fig. 2) is the representation of the expectancy theory as it relates to the motivation behind a professor’s decision to retire voluntarily before the mandatory age of 65. The model was adapted from Ivancevich, J. M., Donnelly, J. H. (Jr.), Gibson, J. L., Collins, J. R. and Nielsen, N. A. (1991, p. 379). The professor who is faced with the decision to retire voluntarily prior to age 65 will make a decision based on some combination of the variables identified in Figure 1. The options facing the professor are “Yes, retire” or “No, do not retire”. If the professor decides to retire there is an expectation that certain aspects of life will follow from that decision. If the professor has been looking forward to retirement, then he/she will be anticipating outcomes with a positive valence. If the professor retires without looking forward to retirement he or she will be anticipating outcomes with a negative valence. For a professor looking forward to retirement, the outcomes with positive valence that he or she anticipates have been indicated previously in the literature to include such things as: more time to spend with family, more time to travel/take pleasure trips (i.e. leisure activities), more freedom from the demands of a full time job, and, more time to volunteer.
For a professor who retires but is not looking forward to it, the outcomes with negative valence that he or she expects have been indicated previously in the literature to include such things as: little or no teaching responsibilities, little or no opportunity to do research, fewer or no publications, less interaction with colleagues, less interaction with students, and a possible lower standard of living. All of these are undesirable for this individual.

3.2 The Survey Instrument

The data for this study were collected through a single survey instrument that was administered online using the software program WebSurveyor™. Online surveys have developed into reliable methods of data gathering. Many reputable organizations now use online surveys on a regular basis for data gathering (e.g. the federal government of Canada, Omni research company and Decima research group).

The survey consisted of five basic parts. Part One of the survey was comprised of 12 general statements regarding professors’ attitudes towards retirement based on the review of literature and the “one on one” interviews. This section was included in the survey to obtain general perspectives on retirement from the respondents. It was anticipated that these results would provide complementary insight to the hypotheses.
Part Two (items 13 through 31) began with a simple question as to their estimate of how probable that they would retire voluntarily before the age of 65. A blank was provided in which they were to place a number from between 0-100 (continuous probability); 0 being zero chance that they would retire and 100 being 100 percent chance that they would retire. It continued with a series of 18 outcomes that respondents were supposed to indicate how desirable each was to them. Fourteen of these 18 outcomes were borrowed, with permission, from Bleicken (1990), and the following four were added by this researcher: personal good health, good health of a significant other, increased life expectancy and enhanced quality of life. Respondents were required to choose from a seven item Likert scale, ranging from 1- “Very Undesirable” to 7--“Very Desirable.”

Part three asked the respondents to revisit the 18 outcomes they were introduced to in Part two and first, indicate how likely each outcome would be attained if they retired early; and two, how likely each outcome would be attained if they continued to work until 65. A continuous probability scale was used. This section was also replicated with modifications, with permission from Bleicken (1990).

Part four (Items 32 through 37) of the survey was a series of six questions on Job Satisfaction. This part of the survey was a normalized instrument that was borrowed in its entirety with permission from Bowling Green State University in the United States. This section concluded with a question regarding what incentives the respondents' universities could offer that would entice them to continue working until 65. A drop down menu was used that had a series of options from which they could choose the top five, based on priority. Or add “other” options.

Part five of the survey was the Demographics section consisting of 21 elements (items 40 through 60), including: age, gender, marital status, research record, tenure status, and elements relating to one's personal financial situation. The final section (items 61 through 62) of the survey was a voluntary section respondents could fill in if they were interested in participating in a longitudinal study in the future. Respondents were assured of the utmost confidentiality.

### 3.3 The Dependent Variables

The model used in this research was a variation on previous iterations by Parker and Dyer (1976) and Bleicken (1990). That refinement is presented symbolically as follows for a person who would choose to retire before 65:

\[ F_r = \Sigma (V_{ir} \times I_{ir}) \]

Where

- \( F_r \) = force to choose (desirability of) “retire voluntarily before 65” role
- \( V_{ir} \) = the perceived valence of the \( i \)th role outcome
- \( I_{ir} \) = the perceived instrumentality of the \( i \)th role outcome for the “retirement voluntarily before 65” role.

Similarly, the likelihood that a person would choose to work until 65 is expected to depend on a similar relative valence of that role and the expectancy of attaining that role. This relationship is presented symbolically as:
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\[ F_e = \left[ \sum (V_{ie} \times I_{ie}) \right] \]

where

- \( F_e \) = force to choose (desirability of) “continue to work until 65” role
- \( V_{ie} \) = the perceived valence of the \( i \)th role outcome
- \( I_{ie} \) = the perceived instrumentality of the \( i \)th role outcome for the “continue to work until 65” role.

Once \( F_r \) and \( F_e \) were computed, \( F_e \) was subtracted from \( F_r \) to obtain a prediction of intention (\( P \)):

\[ F_r - F_e = P \]

Where, \( P \) predicted the likelihood or intention to retire voluntarily before 65.

3.4 Probability

It was decided that a proxy for “\( P \)” would be used in addition to “\( P \)” because only 217 of the 369 respondents (58.8 percent) completed the section necessary to compute “\( P \)” for the Expectancy Model. The independent variable “Probability” was chosen because of the straightforward nature of the question in the survey and for its similarity to “\( P \)” in expected results. The “Probability” question asked respondents to “Please indicate the likelihood that you will retire before the age of 65. Their response could range from “0” (0% chance you will retire before 65) to “100” (100% sure you will retire before the age of 65)”. Ninety-one percent responded.

3.5 Measurement of Independent Variables

In order to operationalize the proposed model, 18 outcomes were used to calculate how likely it was that a professor would decide to retire before 65. Those 18 outcomes are listed in Table 1 with the variable name assigned to each. In addition, 12 hypotheses were developed for purposes of this study. A brief explanation of how they were measured follows. Four hypotheses were measured in similar ways. Self-reported good health of a respondent, self-reported good health of a significant other, greater desire for more leisure time and greater desire to spend more time with family were all measured on the same scale, as follows: Very Undesirable, Undesirable, Somewhat Undesirable, Neither Desirable Nor Undesirable, Somewhat Desirable, Desirable, and Very Desirable. The variable was recoded according to this pattern: Very Undesirable = -3, Undesirable = -2, Somewhat Undesirable = -1, Neither Desirable Nor Undesirable = 0, Somewhat Desirable = 1, Desirable = 2, and Very Desirable = 3.


The predictor variable, “Rank” choices were: Assistant Professor, Associate Professor, Full Professor, and Other. The variable was recoded for analysis as: 0. Other, 1. Assistant Professor, 2. Associate Professor, and 3. Full Professor.

The predictor variable, “Year Born” was measured by having respondents fill in the last two digits of the year they were born. The assigned field began with the digits...
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“19__”. It was decided to ask for “Year Born” rather than simply “Age” for a potentially better data set for analysis.

The predictor variable, “Gender” choices were: “Male” or “Female”. Male was coded as “0” and Female was coded as “1”.

The predictor variable, “Marital Status” choices were: Divorced, Separated, Domestic Partner, Widowed, Single- Never Married, and Married. This variable was recoded into a dichotomous variable for analysis where 0 = “Other than Married” and 1 = “Married”.

The predictor variable, “Research Record” was measured by creating a scale of the following independent variables: Publications in a Tier One Journal, Publications in a Tier Two Journal, and Papers presented at a conference.

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDEN</td>
<td>Have a role that gives me a sense of identity.</td>
</tr>
<tr>
<td>CONTRIB</td>
<td>Feeling that I make a significant contribution.</td>
</tr>
<tr>
<td>LEIS</td>
<td>Opportunity to pursue leisure interests (e.g. travel, hobbies, etc.).</td>
</tr>
<tr>
<td>CHANGE</td>
<td>Functioning in a setting where change is the rule rather than the Exception.</td>
</tr>
<tr>
<td>FLEX</td>
<td>Increasing my flexibility and freedom.</td>
</tr>
<tr>
<td>REWENV</td>
<td>Teaching in a rewarding environment.</td>
</tr>
<tr>
<td>APPCONT</td>
<td>Feeling I am appreciated for my contribution.</td>
</tr>
<tr>
<td>EXCACT</td>
<td>Having activities that are exciting and enriching.</td>
</tr>
<tr>
<td>FLEXTIM</td>
<td>Flexible time with family and friends.</td>
</tr>
<tr>
<td>PRIDE</td>
<td>A feeling of pride and self-esteem.</td>
</tr>
<tr>
<td>ASSOC</td>
<td>Maintaining associations with colleagues.</td>
</tr>
<tr>
<td>PERSGWTH</td>
<td>The challenge of personal growth and change.</td>
</tr>
<tr>
<td>MONYFUT</td>
<td>Making enough money to provide for future needs and security.</td>
</tr>
<tr>
<td>ALTINT</td>
<td>Time for alternative career interests.</td>
</tr>
<tr>
<td>MYHLTH</td>
<td>Personal good health.</td>
</tr>
<tr>
<td>OTHRHLTH</td>
<td>Good health of a significant other.</td>
</tr>
<tr>
<td>LIFEXP</td>
<td>Increased life expectancy.</td>
</tr>
<tr>
<td>QFL</td>
<td>Enhanced quality of Life.</td>
</tr>
</tbody>
</table>

The predictor variable, “Economic Status” was measured by creating a scale of the following independent variables: Household Income Before Taxes and Net Worth.
The predictor variable, “Job Satisfaction” was measured by using the aJDI instrument from Bowling Green State University in California as a scale. This is a previously standardized measurement instrument consisting of 33 elements.

4. Findings

An invitation to participate in this research was distributed to 3,151 university professors; 369 people responded, resulting in a response rate of 11.7 percent. That was within an acceptable range for online surveys as described by Schultz (2006) where he reported that response rates for online surveys should fall within the range of “10% to 40%”. Alreck and Settle (1985, p. 62) determined that 100 respondents were sufficient for statistical analysis if the sample were representative of the population. In a comparison of the sample data with the most current population data of universities and colleges in Atlantic Canada it was determined that the sample data were sufficiently representative of the population in question (see Table 2).

Table 2: Sample and Population Data Comparison

<table>
<thead>
<tr>
<th></th>
<th>Sample</th>
<th>Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Age</td>
<td>52 years</td>
<td>51 years*</td>
</tr>
<tr>
<td>Male</td>
<td>56.91%</td>
<td>65.27%**</td>
</tr>
<tr>
<td>Female</td>
<td>40.92%</td>
<td>34.73%**</td>
</tr>
<tr>
<td>Ph.D. Degree</td>
<td>65.00%</td>
<td>70.00%*</td>
</tr>
<tr>
<td>Full Professor</td>
<td>42.30%</td>
<td>34.39%**</td>
</tr>
</tbody>
</table>

* MPHEC, 2002 (Maritimes)  
** Statistics Canada, 2006 (Atlantic Canada)

The average age of the respondents was 52 years. The majority of the respondents were male (56.9 percent). The majority of the respondents reported as “Full Professor” (42.3 percent) with an earned doctorate (65 percent) and with an average 18.77 years of teaching experience. The majority of the respondents were married (68.3 percent). More than one in every eight of those aged 50-59 stated they were 100 percent likely to retire before 65. Of those 60-64, more than one in five (22.8 percent) reported they were 100 percent likely to retire before 65. If it could be predicted that those who were 55-64 would be even more certain they would retire before 65, this could represent a mass exodus of professors in the very near future once they were in the age range of 60-64. Under an environment of mandatory retirement, this represented great human resource issues for administrators of post-secondary institutions in Canada and should be a warning bell to accelerate planning and research that would encourage professors to remain on the job until they absolutely have to retire.

Bivariate regression analysis was performed on each of the 12 predictor variables against the “P” variable and against the “Probability” variable. Each was run without control variables, with just one independent variable in each regression. The level of significance was set at \( p < .05 \). Only four were considered to be statistically significant when regressed with “P”:

1. The closer one is to 65 will be positively related to the decision to retire early.
2. A greater desire to spend more time with family will be positively related to the decision to retire early.
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3. More comprehensive financial preparation for retirement will be positively related to the decision to retire early.
4. Higher levels of Job Satisfaction will be negatively related to the decision to retire early.

Only three were considered to be statistically significant when regressed with “Probability”:

1. The closer one is to 65 will be positively related to the decision to retire early.
2. More comprehensive financial preparation for retirement will be positively related to the decision to retire early.
3. Higher levels of Job Satisfaction will be negatively related to the decision to retire early.

4.1 Multiple Regression

After analyzing the results of the bivariate regressions, it was decided to perform a multiple regression on the independent variables to provide further analysis of the predictors. Simultaneous, multiple regression, ENTER method (SPSS™), was used to determine which predictor variables accounted for the variance in the dependent variable, or in this case, the computed “P” from the Expectancy Model and for the most variance in the proxy--Probability. It was decided to use simultaneous regression rather than a stepwise regression in order to provide a more appropriate comparison with the bivariate regressions. With 12 independent variables, it was necessary to run multiple regressions to determine if, and to what degree, the predictor variables influenced one another.

When regressed with “P” the following predictor variables produced statistically significant results: Year Born, Flexible Time with Family, Economic Status and Job Satisfaction [See Table 3(a)]. With an R square of .303 (Adjusted R square .253) for “P”, we can say that 30.3 percent of the variance in the dependent variable can be explained by the 12 predictors.
### Table 3(a): Multiple Regressions of Predictor Variables Against “P”

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td>B</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-12.399</td>
<td>8.181</td>
<td>-1.516</td>
</tr>
<tr>
<td></td>
<td>Degree Completed</td>
<td>-.287</td>
<td>1.031</td>
<td>-.020</td>
</tr>
<tr>
<td></td>
<td>Rank</td>
<td>.364</td>
<td>.772</td>
<td>.038</td>
</tr>
<tr>
<td></td>
<td>Year Born</td>
<td>.222</td>
<td>.087</td>
<td>.210*</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1.655</td>
<td>1.388</td>
<td>.084</td>
</tr>
<tr>
<td></td>
<td>Marital Status</td>
<td>-1.087</td>
<td>1.625</td>
<td>-.051</td>
</tr>
<tr>
<td></td>
<td>My Health</td>
<td>-.468</td>
<td>1.352</td>
<td>-.028</td>
</tr>
<tr>
<td></td>
<td>Other Health</td>
<td>.540</td>
<td>.984</td>
<td>.050</td>
</tr>
<tr>
<td></td>
<td>Leisure</td>
<td>.408</td>
<td>.651</td>
<td>.048</td>
</tr>
<tr>
<td></td>
<td>Flexible Time</td>
<td>2.205</td>
<td>.908</td>
<td>.194*</td>
</tr>
<tr>
<td></td>
<td>Research Record</td>
<td>-.026</td>
<td>.021</td>
<td>-.088</td>
</tr>
<tr>
<td></td>
<td>Economic Status</td>
<td>.826</td>
<td>.242</td>
<td>.295*</td>
</tr>
<tr>
<td></td>
<td>Job Satisfaction</td>
<td>-.196</td>
<td>.031</td>
<td>-.424*</td>
</tr>
</tbody>
</table>

* p < .05

R square = .303

When regressed with “Probability,” the following predictor variables produced statistically significant results: Year Born; Economic Status; and Job Satisfaction [See Table 3(b)]. With an R square of .190 for "Probability", we can say that 19 percent of the variance in the dependent variable can be explained by the 12 predictors.
Table 3(b): Multiple Regressions of Predictor Variables Against “Probability”

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>.060</td>
<td>.281</td>
</tr>
<tr>
<td>Degree</td>
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<td>.037</td>
</tr>
<tr>
<td>Completed</td>
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<tr>
<td>Rank</td>
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<td>.029</td>
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<tr>
<td>Year Born</td>
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<td></td>
</tr>
<tr>
<td>Gender</td>
<td>.012</td>
<td>.049</td>
</tr>
<tr>
<td>Marital Status</td>
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<tr>
<td>My Health</td>
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<td>.043</td>
</tr>
<tr>
<td>Other Health</td>
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</tr>
<tr>
<td>Leisure</td>
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</tr>
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<td>Flexible Time</td>
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<td>.030</td>
</tr>
<tr>
<td>Research Record</td>
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<td>.001</td>
</tr>
<tr>
<td>Economic Status</td>
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<td>.009</td>
</tr>
<tr>
<td>Job Satisfaction</td>
<td>-.005</td>
<td>.001</td>
</tr>
</tbody>
</table>

*p < .05  
R square = .190

5. Conclusion/Implications

The analysis of the data against the dependent variable “P” did produce some significant results. However, more than one-third of the respondents did not complete the section of the survey necessary to arrive at the computed “P” in Expectancy Theory. As a result, it was decided to use the variable “Probability” as a proxy for “P” to determine whether or not there was any likelihood that professors would retire voluntarily before 65.

This research was able to prove that “Expectancy Theory, when tested as a within-person intention model, is useful for understanding of University System faculty members decision to retire or not retire” (Bleicken, 1990, p. 105); insofar as it was true for the following predictor variables when regressed with the dependent variable “P”: year born, more time with family, economic status and job satisfaction. The following independent variables reported significant results when regressed with the proxy dependent variable “Probability”: degree completed, year born, research record, economic status and job satisfaction. This was true, even of the expanded model created for this research, that included elements of “Job Satisfaction” and the “4 S Systems Model.”

The results of the research supported the hypothesis that, “higher levels of job satisfaction will be negatively related to the decision to retire early” when bivariate regressions were performed. These findings support those of Bleicken (1990) who found that, “satisfaction with one’s work and commitment to the institution were generally related to an intention to extend work life” (p. 105).
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5.1 Practical Implications for University Administrators

Given the demographic realities of the Baby Boomer cohort of the general population at the time of the research, university administrators would find results of this research beneficial when trying to retain professors until the age of 65 in an environment of Mandatory Retirement.

Listed below are four practical implications of this research that may prove beneficial to administrators of post-secondary institutions.

First, maintain high levels of job satisfaction among professors. This research indicated that Job Satisfaction was the strongest predictor of a professor’s decision to retire voluntarily before 65 in a Mandatory Retirement environment when regressed with “P”. When professors were asked what their university could do to entice them to stay on the job until 65, the top five incentives reported, in order of importance, were: Higher Pensions, Higher Wages, Reduced Workload, Greater Health Benefits, and finally, the Provision to Phase into Retirement.

With the move away from defined benefit pension plans to defined contribution pension plans, it may be more difficult for university administrators to be able to offer higher pensions to professors to influence them to continue working until 65. The issue of declining enrolments may impact upon administrators’ abilities to offer higher wages to professors too, since budgets are being impacted on many levels; not just because of declining enrolments. When one talks about a reduced workload, it may be necessary to determine what professors mean when they use this term. Does it mean fewer hours of instruction? Does it mean lighter requirements for publications? Does it mean fewer hours of student advising? These and other elements would have to be identified. The issue of greater health benefits also hearkens back to the budget’s bottom line. If universities could get professors to share in the cost associated with greater health benefits it might be feasible for them, but if the full cost is to be borne by the employer, the option may not be there. The option of being able to phase into retirement may be a more plausible item for administrators to offer. This option, if sanctioned by governing unions, might actually save universities money that they could then begin to filter into some of the other incentives that professors thought could entice them to continue to work until 65.

Note that three of the five incentives had direct financial implications that would mean that universities need to find more financial resources that they could direct toward improving the financial status of professors if they wished to retain them until 65. The option for a reduced workload could be accommodated by hiring more teachers’ assistants and more sessional lecturers. Allowing professors to phase into retirement could also open up opportunities for other professors who have not been able to break into the academic ranks or who have not had opportunity for advancement through the professorial ranks. University administrators can have reasonable confidence that the more satisfied their professors are with their job, the less likely they will be to decide to retire voluntarily before 65.

The second practical implication is directly tied to the first. Results of the research indicated that Economic Status, or maybe more accurately stated, estimate of wealth, was the strongest predictor of a professor’s decision to retire voluntarily before 65 in a Mandatory Retirement environment when regressed with Probability. This variable
used data from two variables in the research: Household Income Before Taxes and Net Worth. This factor alone is significant because professors are usually making their highest salaries as they approach retirement years. They have also accumulated wealth from capital purchases of things like a primary residence, maybe a vacation home; and they have built up other financial reserves through investments in anticipation of their retirement years. The more comfortable respondents were with their Economic Status, the more likely they were to retire early.

This is in direct competition with the first implication stated above. As a result, university administrators need to find other ways to increase job satisfaction among their staff. Administrators certainly cannot decide to stop increasing the pay of their professors or they would leave a lot sooner than retirement age; and practically speaking, most professors belong to unions and items concerning pay are mandated by union contracts. More focus needs to be given to rewards of an intrinsic nature (e.g. having a role that gives them a sense of identity, feeling that they make a significant contribution, teaching in a rewarding environment, feeling they are appreciated for their contribution, etc.) and to a degree sufficient enough that the extrinsic rewards like more pay and higher pensions take second place to intrinsic rewards.

The MPHEC (2002) reported that the number of contract (i.e. part time) teachers at universities was increasing. This was seen as an indication that some universities were not replacing all professors who retire with another tenure track candidate, possibly because of shrinking enrolments and tighter budgets. A part time or contract teacher certainly does not command as high a salary as a tenure track professor. So, if economic status (i.e. wealth) was a priority for professors, they might procure full time employment elsewhere to accomplish that goal; creating yet another retention issue for university administrators.

The third practical implication relates to two of the predictors that were seen to be significant: the desire of professors for more time to engage in leisure activities (e.g. travel, hobbies, etc.) and the desire for more flexible time with family. Priorities for people in general tend to shift as one ages and ones perspective on life changes; presumably professors are probably no different than the general population. Professors still work 60-70 hours weekly (MPHEC, 2002). Professors who are new in their career may have expectations of a heavy work load in order to obtain tenure. However, it is possible that as professors come closer to the end of their career, there may be an expectation of a lighter work load (e.g. fewer courses to teach, fewer papers to grade)? Administrators would do well to implement policies that would allow more senior faculty members with the opportunity to teach fewer courses or to maintain a lighter load in administrative work in things like committees. Possibly more money could be provided to senior faculty members for more teaching assistants.

The final practical implication related to the research record that professors accumulate. The scale for research record included publishing in Tier 1 and Tier 2 journals, and papers presented at a conference. Professors with larger research portfolios were less likely to retire before 65. As a result, university administrators need to provide the means and support necessary for the researchers among them. Research records are valuable assets for any university faculty department. Many professors feel the pressure in academe to “publish or perish”. However, not all professors have a strong desire to publish. For those professors who want to pursue
research more than teaching, they need to know that the time and financial support will be available from their institution to make that desire a reality.

5.2 Limitations of the Research

One particular result of this research was limited due to an arbitrary decision of the researcher. As the responses to the question regarding the number of publications in refereed journals and in books published were analyzed, the numbers submitted seemed far too high as would be reasonable for a five-year period. In fact, one respondent indicated in the “Comment” section that he had published over 100 articles throughout his career. In an effort to make sense of the responses, the researcher made the following decisions:

1. that the duration of the careers identified by the respondents was 30 years in general
2. that respondents had submitted numbers for their entire career and not just the previous five years
3. to divide any responses that were “6” or greater, by “6” (30/5) to arrive at what was deemed to be a more accurate reporting of each person’s research for the previous five years.

As a result, these findings as they related to Research Record need closer scrutiny before they can be generalized to the population with validity and reliability.

Secondly, more than one-third of the respondents did not complete the section of the survey instrument required to calculate “P” in the Expectancy Theory model adapted for this research. It was thought that respondents found the process too cumbersome to complete. A few comments on the surveys also indicated that they were unable to view the section properly on their computer because it was using a different operating system than that which was used to create the survey.

Thirdly, the research was conducted only at English-language colleges and universities in Atlantic Canada.

5.3 Recommendations for Future Research

More analysis needs to be done to see how groups of antecedents interact and interrelate with one another in the decision to retire voluntarily before 65. For example, when combined, what part do professorial ranking, attained formal education and research record play in influencing ones decision to retire before 65? In addition, when combined, what part do more personal predictors like the individual’s health and the health of other family members as well as availability of health benefits, play in the decision to retire before 65? It would also be beneficial to actually determine how, if at all, the amount of financial planning for retirement a professor has done, would impact their decision to retire before 65.

The purpose of doing this research included the beginnings of developing a longitudinal study on the topic. It will take 10-15 years for the Baby Boomer cohort to retire; providing a ready sample for this type of research. If this were to be carried out, it might be necessary to focus on specific sections of the study to ensure more accurate responses and to facilitate completing the survey. The format of an online
survey also needs to be confirmed so that all computer operating systems are able to view the survey in a uniform manner; thus making it easier to complete the survey. In addition it would be beneficial to have the survey translated into French so that professors who teach in Canada’s other official language could also be included in the research.

The survey should be distributed throughout the rest of Canada to those jurisdictions that have mandatory retirement. Some jurisdictions may strike down the mandatory retirement legislation by the time the next stage of the research is completed. The purpose of the research would be somewhat negated in those jurisdictions where there is no mandatory retirement.

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