Model For Testing The İmpact Of Motivational Factors Of Nascent Entrepreneurs On Business Surviving Success

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Abstract

The development of founded companies is influenced by a wide variety of factors. In order to predict the chance of success for entrepreneurship, the relationship between these factors and the business surviving success has to be analyzed. Research indicates an influence of the motivation of entrepreneurs and financial success.

The object of this paper are nascent entrepreneurs and the subject is the motivational structure of nascent entrepreneurs. Methods of the paper are literature review, factor analysis and calculated model. Aim of the paper is building a relationship between the motivation of entrepreneurs and the business surviving success of the founded companies. The result of the paper is the 'four force of entrepreneurial motivation' model, which helps to analyses the relationship between the motivation of the entrepreneur and the business surviving success. It shows that the motivation of entrepreneur can be clustered in 'financial reward', 'need for achievement', 'social recognition' and 'independence. The business surviving success is calculated as the geometric mean of the return on sales over 3 years based on the expenses and revenue from the founded companies in the PSED II dataset.

It is the first time that the motivation of entrepreneurs is set in relationship with the business surviving success. The study develops a new model to test the relationship between the motivation of entrepreneurs and the business surviving success. It is the first study, which uses the geometric mean of the return on sales over a time span of 3 years. The clustering of motivation from different studies is reviewed for the first time.

Keywords: Entrepreneurship, motivational factors, nascent entrepreneurs

Introduction

Entrepreneurs start their own business due to different personal goals. In order to achieve the goals, the founded business has to survive, which

becomes the primary goal for entrepreneurs. Governmental institution, venture capitalist and the entrepreneur invest resources in the entrepreneurship which get lost when the founded business fail. It is important to identify entrepreneur who have a higher change of starting a business that survives in order to get a return on the investment. A factor, which has an expected impact on the success of the entrepreneurship, is the entrepreneur who starts the business. In order to cluster the entrepreneurs, one factor, which is different among the entrepreneurs, is the motivation to start the business. By testing the impact of the motivational factors of entrepreneurs on the business surviving success, a prediction for the success chance of the investment from the entrepreneur, governmental institution and venture capitalists can be drawn. This study creates a model for testing the relationship between the motivation of entrepreneurs and the business surviving success.

PSED II dataset for testing the relationship between motivational factors and business surviving success

The study is based on the PSED II (Panel of entrepreneurial dynamics) dataset which is a database involving data about entrepreneurs in the USA. The design of the PSED II is based on the first PSED dataet and the GEM (Global entrepreneurship montior). The PSED II dataset involved some methodological imporovements compared with the other two datasets. The PSED II dataset represents 12.6 million entrepreneurs in the USA and 7.4 million businesses. (Reynolds & Curtin, 2007)

The dataset was created by identifiying a resentative sample of entreprneurs by screening households in the USA through a professional screening company. The identified entrepreneurs have to be activily involved in the process of starting a business. In addition to that, the identified entreprneurs have to own the founded company and the founder have to be involved in the startup process by themsleves. 31,845 people were called in order to indentify 1214 nascent entrepreneurs.

The first interviews with these entrepreneurs was set up between October 2005 and January 2006 with the 1214 entreprenerus who are activily involved in the process to start a business. The interview was setup for sixty minutes by the University of Michigan. The institute which was driving the research was the Institute for Social Research. Among a wide range of questions, the intial interviews recorded the motivation of entreprenuers by a self-evluation of 14 motivational variables on a scale from 1 to 5. After the initial interview, the entreprneurs were again called one year after the first interview in order to record a wide range of differnt variables. Among these variables was the revenue and expense. This procedure was repeated every

year for 5 years, so that the development of the founded business can be used to test the relationship with a set of 6000 variables.

Methods used for creating a model to test the relationship between motivational factors and business surviving success

The motivation of entrepreneurs is clustered by literature review of other studies about entrepreneurial motivation. Reviewing the studies show, how other studies cluster the motivation of entrepreneurs. The result of the literature review are used to have a first cluster of entrepreneurial motivation.

In the second step, the motivational variables from the PSED II dataset are analyzed by factor analysis. The results from the factor analysis will be compared with the results of the literature review. Similarities and differences will be shown and analyzed.

PSED II dataset includes the revenues and expenses of the founded companies over a time of 5 years. Based on these financial indicators, the return on sales is calculated for each of the years. In addition to that, the geometric mean of the return on sales on the first 3 years is shown. The first 3 years are most important for the surviving of the business. The geometric mean of the return of sales is the business surviving success in this study.

In order to test the relationship between different motivational factors and the business surviving success, the identified motivational variables and factors as well as the financial information for the business surviving success are set into relationship within a model. This model is the result of the study and basis for testing the impact of the motivation on business surviving success.

Results of the study are presented in different stages of the research. The summary of the findings from literature review are presented in a table showing a categorization of the motivational variables by different authors. The result of the factor analysis are demonstrated in two tables. The first table shows the result of the KMO and Bartlett's Test. The second table "Structure Matrix" shows the loading of the motivational variables of the PSED II on the motivational factors.

The model is demonstrated in a figure, showing the relationship between the motivation factors and business surviving success. In addition to that, the relationship between the motivational variables and motivational factors are shown. It is also shown how the variable business surviving success is calculated based on the financial indicators from the PSED II dataset.

Relationship between motivational factors of entrepreneurs and business surviving success

The results of the literature shows, that motivation of entrepreneurs can be divided into extrinsic as well as intrinsic motivational factors. Studies involving entrepreneurial motivation show a more detail categorization of the motivational factors. In order to identify successful entrepreneurs who found companies that have a high chance of survival, the clustering have to be more detailed in order to link recommendations to the factors. All motivational variables of the analyzed studies are taken into account

One of the first categorization of motivation factors is done by Sari Scheinberg in the the study 'Associated Researchers of International Entrepreneurship' (SARIE). (Alange & Scheinberg, 1988) (Birley & Westhead, 1994) (Blais, 1990) (Dubini, 1988) (Scheinberg1988 & MacMillan) (Shane, Kolvereid & Westhead, 1991) The factors of the SARIE study is based on different sources for the motivational categorization. For example, the motivation to avoid uncomfortable or negative situations is analyzed by a variety of authors. (Vroom, 1964) (Collins, 1955) (Cooper, 1971) (Hagen, 1962) The motivational factor 'social recognition' was part of the pyramid of needs by Maslow in 1943. (Maslow, 1943) Other authors built their studies on this motivational factor for entrepreneurs like McClelland. (McClelland, 1961) Hofstede analyzed the desire for independence in the investigation of 1980. (Hofstede, 1980)

Based on 1402 business owners from 11 countries, the authors Scheinberg and MacMillan grouped the motivation of entrepreneurs, which are recorded by 38 motivational variables in 6 factors. (Scheinberg & MacMillan, 1988) The thirty-eight motivational variables of the study by Scheinberg and MacMillan were further analyzed by Shane et al. and clustered more detailed in 23 factors. In a study with 597 entrepreneurs in Norway, Great Britain and New Zealand, the authors Shane, Kolvereid and Westhead divided the motivational factors in four categories. (Shane, Kolvereid & Westhead, 1991) The design of the SARIE study was also used by the authors Birley and Westhead to study entrepreneurs in the United Kingdom. The results of the relationship between the motivational factors of the 405 entrepreneurs which were analyzed in the study on the business performance, company size and type as well as number of employees was, that no significant relationship could be identified. In order to test this relationship, the entrepreneurs were cluster in 7 factors. (Birley & Westhead, 1994)

A different clustering was done by Kolvereid by analyzing 372 people who are entrepreneurial active within the last four years prior to the study in Norway. These motivational variables were categorized in 11

motivational factors. The relationship was analyzed between growth desire, characteristics and motivation of entrepreneur. (Kolvereid, 1992)

A study about 142 entrepreneurs starting a company was done by Gatewood, Shaver and Gartner. The answers from open questions were summarized by factor analysis. The motivational factors were classified in eight categories. (Gatewood, Shaver & Gartner, 1995) Barba-Sanchez and Atienza-Sahuquillo send out 117 questionnaires in their study about entrepreneurship in Spain. The confidence level of 95% was achieved among the 101 completed responses and the sampling error rate was at 7.8%. The authors performed a factor analysis based on the motivational factors of the SARIE study. The result of the factor analysis was 7 different motivational factors.

The GEM report from Singapore in 2014 was analyzed by Choo and Wong in order to identify the clustering of motivation among 145 responses. Motivational factors were drawn by principal components analysis. Only factors with a loading of at least 0.5 were included. The motivational factors were divided in to (1) extrinsic rewards, (2) independence and (3) intrinsic rewards. (Choo & Wong, 2006) Boyd and Gumpert clustered motivation of entrepreneurs in personal and financial rewards. (Boyd & Gumpert, 1983) Brockhaus and Horowitz divided motivation in 3 factors, which are the performance, independence and competition. (Brockhaus & Horowitz, 1986) Herron and Robinson divided the motivation also in 3 factors, which were competition, independence and achievement. (Herron, L. & Robinson, 1993)

A different categorization was performed by Carter, Gartner, Shaver and Gatewood by analyzing the motivational variables of the PSED I dataset and performing a factor analysis. The results of the factor analyses can be found in the table 'Summary of motivational factors in studies'. (Carter, Gartner, Shaver & Gatewood, 2003)

The literature review of the studies with entrepreneurial motivation show, that there is no common clustering of motivation. Authors use different categorizations in order to analyze the impact of different motivational factors on different dependent variables. The motivational factors from the various authors are shown and categorized in the table 'Summary of motivational factors in studies'. The assignment of the motivational factors to the categories is done by the identification of similar characteristics of these factors. All factors can be assigned to one of four categories, which are 'Independence', 'Social recognition', 'Need for achievement' and 'Financial reward. It is the first time that a clustering across the relevant studies in the field of entrepreneurial motivation is done. The motivational variables from the studies as well as the categorization of the variables to motivational factors can be found in the table 'Summary of motivational factors in studies'.

Summary of motivational factors in studies

	Schein-berg	Shane	Birley	Kolvereid	Gatewood	Barba-Sanchez	Choo	Carter
Independence	Need for indepen-dence	Independence	Need for independence	Autonomy	Autonomy, independence	Need for personal autonomy	Independence/autonomy	Independence
	Need for escape				Enjoyment of self-employment		To be my own boss	
Need for achievement	Need for personal development	Learning	Need for personal development	Self-realization	Knowledge and experience	Need for achievements/ self-realization	To realize my dream	Self-realization
	Need for approval		Need for approval		To show that it could be done	Need for competetion	To challenge myself	
Social recognition		Roles	Following role models			Social needs and personal power		Roles
	Communitarianism	Recognition	Welfare considerations	Social environment		Need for affiliation		Recognition
Financial reward					A desire to make more money		To earn more money	
	Perceived instrumentality of wealth		Perceived instrumentality of wealth			Financial need		Financial success

Table 1: Categorization of the motivational factor used by the studies of differnt authors

The clustering of motivation is furthermore analyzed by factor analysis of the motivational variables from the PSED II dataset. The dataset includes 14 motivational variables, which are the result of the self-evaluation of the entrepreneurs within 6 months of the initial setup of the company. No retrospective recording of motivation was done which would provide a falsified picture. The 14 motivational variables of the 103 entrepreneurs are analyzed by factor analysis.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,776
Bartlett's Test of Sphericity	Approx. Chi-Square	440,471
	df	91
	Sig.	,000

Table 2: KMO and Bartlett's Test of the factor analysis

The Kaiser-Meyer-Olkin Measure of Sampling Adequacy results in 0,776. This indicates that the results of the factor analysis are suitable and can be used for further analysis. The results of the factor analysis are shown in the table 'Structure Matrix'.

Structure Matrix

	Component			
	1	2	3	4
AW14.IMP: POWER TO INFLUENCE AN ORG	,800			
AW10.IMP: ACHIEVE AND BE RECOGNIZED	,762			
AW11.IMP: DEVELOP IDEA FOR A PRODUCT	,735			
AW13.IMP: FULFILL A PERSONAL VISION	,713			
AW12.IMP: BUILD GREAT WEALTH	,687	,655		
AW6.IMP: FINANCIAL SECURITY		,807		
AW9.IMP: EARN LARGER PERSONAL INCOME		,801		
AW8.IMP: BUILD BUS KIDS CAN INHERIT		,637		
AW7.IMP: FOLLOW EXAMPLE PERSON ADMIRE			,736	
AW4.IMP: RESPECTED BY FRIENDS			,729	
AW1.IMP: HIGHER POSITION IN SOCIETY			,688	
AW3.IMP: CONTINUE FAMILY TRADITION			,662	
AW5.IMP: FREEDOM TO ADAPT WORK APPROACH				,801
AW2.IMP: GREATER FLEXIBILITY IN LIFE				,786

Table 3: Result of factor analysis as the loading of the motivational variables on the factors

The motivational variables have loadings on four different factors. Factor 1 is loaded by the variables 'power to influence an organization', 'achieve and be recognized', 'develop an idea for a product' and 'fulfill a

personal vision'. All variables are connected to the desire for achievement. The first component is named 'need for achievement'. The second component includes 'build great wealth', 'financial security', 'earn larger personal income' and 'build business kids can inherit'. These variables relate to the desire for financial reward. The variable 'build great wealth' has also a loading on the first factor, but has a better fit to the motivational factor 'financial reward'.

The motivational variables 'follow example person admire', 'respected by friends', 'higher position in society' and 'continue family tradition' are related to the motivational factor 'social recognition'. There are two loadings on the fourth factor. The loadings come from the motivational variables 'freedom to adapt work approach' as well as 'greater flexibility in life'. These motivational variables can be summarized as the desire for independence.

Taking into account the findings from literature review as well as the results of the factor analysis of the motivational variables from PSED II dataset, it can be concluded that the motivation of entrepreneurs can be clustered in four categories. The motivational factors are as following: (1) need for achievement, (2) financial reward, (3) social recognition and (4) independence.

The motivation of entrepreneurs will be tested on the business surviving success. The business surviving success is indicated by different financial factors. The PSED II dataset includes the expenses and the revenues from 103 entrepreneurs over a time span of 3 years. Based on this information, the return on sales for each of the 3 years is calculated. The business surviving success is indicated by the geometric mean of the return on sales over 3 years as shown in the model. The name of the model is 'Four force of entrepreneurial motivation' model.
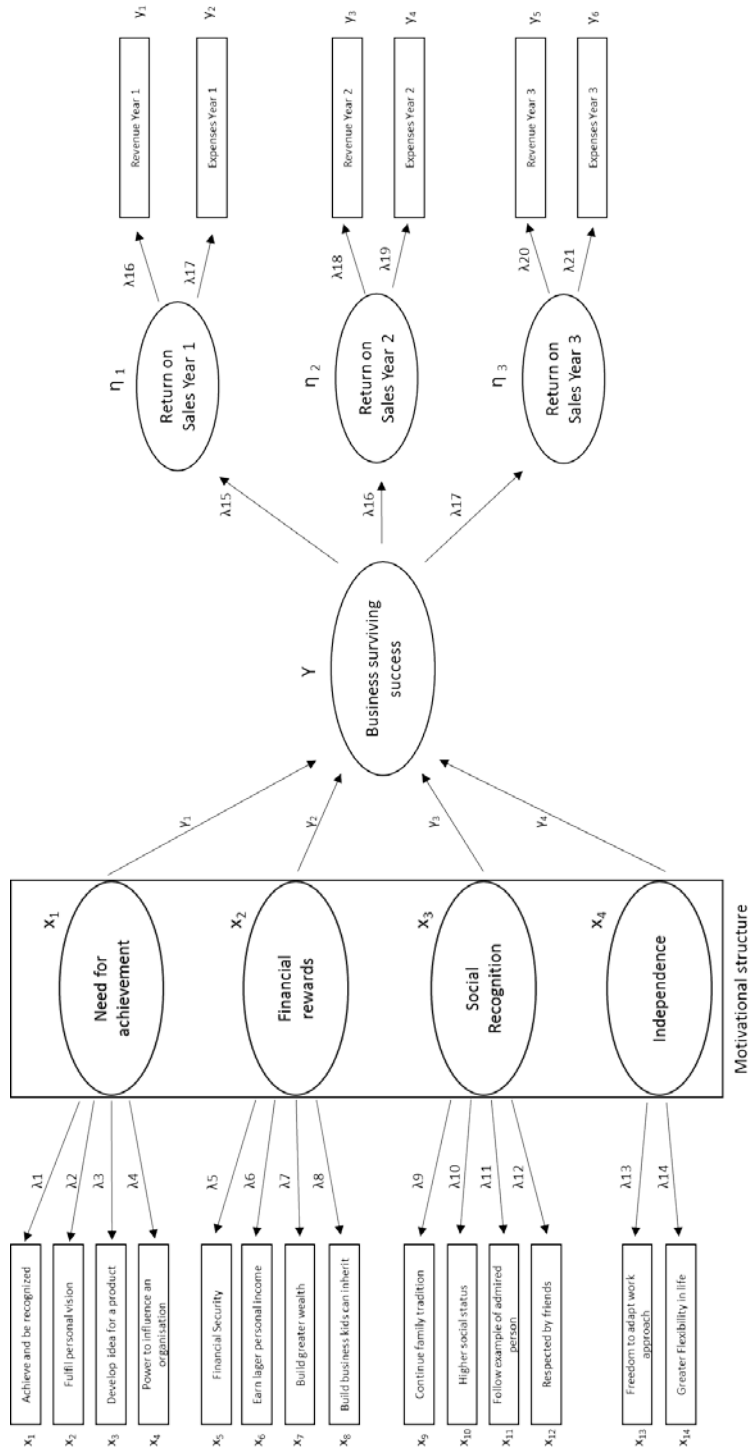
Figure1: Four force of entrepreneurial motivation model

The 'four forces of entrepreneurial motivation model' demonstrates the relationship between motivation of entrepreneurs and the business surviving success. The independent variables are the motivational factors identified by the factor analysis. The dependent variable is the geometric mean over 3 years calculated from the PSED II dataset. The motivation in the model is shown as a structure, since an influence between the motivational factors is expected.

Conclusion and suggestions

In order to analyze the impact of motivation of entrepreneurs on business surviving success, the motivation has to be clustered and the business surviving success has to be described with financial indicators. Reviewing the literature of studies with entrepreneurial motivation shows that there is a wide variety of different motivational factors used to cluster the motivation. Common patterns can be seen by clustering the factors from the different studies. The factors can divided into four different categories, 'need for achievement', 'financial reward', 'social recognition' as well as 'independence'. Analyzing the motivational variables from the PSED II study approves this cluster of motivation. Based on the results of these two approaches, the 'four force of entrepreneurial motivation' model is created.

It can be concluded from the literature review, that the motivation of entrepreneurs is a relevant and important factor to explain the development of entrepreneurships. In order to fulfill any other personal goal of the entrepreneur, the founded company has to survive. The surviving success is indicated by the geometric mean of the return on sales over 3 years.

The 'four force of entrepreneurial motivation' model provides a framework to analyze the impact of the motivation of entrepreneurs on the business surviving success. Additionally, each of the motivational factors can be tested on their impact on the business surviving success. In order to gain an even more detailed picture, each of the motivational variables can be correlated to the survival success.

In the next step, the relationship between the motivation of entrepreneurs and the business surviving success will be analyzed by multiple regression analysis. The results show the impact and significance of the 'four force of entrepreneurial motivation' model as well as the influence of each of the factors on the business surviving success.

The results of this paper is relevant for different target groups. In the following, these groups will be addressed separately with individual recommendations:

To the investment promotion agencies of governments

- It is necessary for investment promotion agencies to understand the motivation of entrepreneurs in order to motivate them target-oriented.
- Analyzing the relationship between the motivation of entrepreneurs and business surviving success helps the EU to invest the money from the EU structural fund target-oriented to entrepreneurs who have a high probability for starting a successful company.
- The Small Business Administration agency in the USA create framework conditions for entrepreneurs. In order to understand the right framework conditions of successful entrepreneurs, the 'four force of entrepreneurial motivation' model delivers an explanation on what motivates successful entrepreneurs.

To venture capitalist
- The results of the article show, that different motivational factors have a different impact on the business surviving success. Venture capitalists should consider the motivation of entrepreneurs for investing their resources.

To researchers
- For Researchers in the area of entrepreneurship, the results of this paper provides a model for testing the relationship between the motivation of entrepreneurs and the business surviving success of the founded companies.
- The model can be tested with the figures from the PSED II dataset with a multiple regression analysis.
- The 'four force of entrepreneurial motivation' can be used as a framework for developing a questionnaire in order to identify the motivation of entrepreneurs to start a new business.

To entrepreneurs
- The model shows that the motivation to start a new company is an indicator for the future success of the founded company. Therefore, the entrepreneurs should consider their own motivation as a relevant part for predicting the business surviving success of their founded company.

References:
Alange, S. & Scheinberg, S. Swedish entrepreneurship in a cross-cultural perspective. *Frontiers of Entrepreneurship Research, Wellesley, MA: Babson College,* 1988
Barba-Sanchez, V. & Atienza-Sahuquillo, C. Entrepreneurial behavior: Impact of motivation factors on decision to create a new venture.

Investigaciones Europeas de Direccion y Economia de la Empresa, 2012, *18*, 132-138

Birley, S. & Westhead, P. A taxonomy of business start-up reasons and their impact on firm growth and size. *Journal of Business Venturing,* 1994, *9*, 7-31

Blais R.A., T. J. National, regional or world patterns of entrepreneurial motivation? An empirical study of 2,278 entrepreneurs and 1,733 non-entrepreneurs in fourteen countries on four continents. *Journal of Small Business & Entrepreneurship,* 1990, *7*, 3-20

Boyd, D. P. & Gumpert, D. E. Coping with Entrepreneurial Stress *Harvard Business Review,* 1983, 44-64

Brockhaus, R. H. & Horowitz, P. The psychology of the entrepreneur. *In: DL Sexton and RW Smilor, (Eds.): The art science entrepreneurship. Cambridge: Ballinger. pp. 25-48.,* 1986

Carter, N. M.; Gartner, W. B.; Shaver, K. G. & Gatewood, E. J. The career reasons of nascent entrepreneurs. *Journal of Business Venturing,* 2003, *18*, 13-39

Choo, S. & Wong, M. Entrepreneurial Intentions: Triggers and Barriers to New Venture Creations in Singapore. *Singapore Management Review,* 2006, *28*, 47-64

Collins, D. & Moore, D. The Enterprising Man. *Double Day, New York.,* 1955

Cooper, A. The Founding of Technologically Based Firms. *Center for Venture Management, Milwaukee, WI.,* 1971

Dubini, P. The influence of motivations and environment on business start-ups: some hints for public policies. *Journal of Business Venturing,* 1988, *4*, 11-26

Gatewood, E.; Shaver, K. & Gartner, W. A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation. *Journal of Business Venturing,* 1995, *10*, 371-391

Hagen E.E. On the Theory of Social Change: How Economic Growth Begins. *Dorsey Press, Homewood, IL.,* 1962

Herron, L. & Robinson, R. B. A Staictural Model of the Effects of Entrepreneurial Characteristics on Venture Performance. *Journal of Business Venturing,* 1993, *8*, 281-294

Hofstede, G. Culture's consequences: International differences in work related values. *Beverly Hills, CA: Sage.,* 1980

Kolvereid, L. Growth aspirations among Norwegian entrepreneurs. *Journal of Business Venturing,* 1992, *7*, 209-222

Maslow, A. A theory of human motivation. *Psychological Review,* 1943, *50*, 370-396

McClelland, D. C. The achieving society. *Princeton, NJ: Van Nostrand.,* 1961

Scheinberg, S. & MacMillan, I. An 11-country study of motivations to start a business. *In: Kirchoff, B.A., Long, W.A., McMullan, W.E., Vesper, K.H., Wetzel, W.E. (Eds.), Frontiers of Entrepreneurship Research: 669-687. Wellesley, MA: Babson College.,* 1988

Reynolds, P. D. & Curtin, R. T. Business Creation in the United States: Panel Study of Entrepreneurial Dynamics II First Wave Results. *Hanover, MA: now Publishers: Foundations and Trends in Entrepreneurship,* 2007

Scheinberg, S. & MacMillan, I. An 11-country study of motivations to start a business. *In: Kirchoff, B.A., Long, W.A., McMullan, W.E., Vesper, K.H., Wetzel, W.E. (Eds.), Frontiers of Entrepreneurship Research: 669-687. Wellesley, MA: Babson College.,* 1988

Shane, S.; Kolvereid, L. & Westhead, P. An exploratory examination of the reasons leading to new firm formation across country and gender. *Journal of Business Venturing,* 1991*, 6*, 431-446

Vroom, V. Work and Motivation. *New York: John Wiley,* 1964