

THE RELATIONSHIP BETWEEN MOTIVATION AND HUMAN CAPITAL THEORY 1

MARIANN BENKE teaching assistant

University of Pécs Faculty of Business and Economics

JULIANNA NÉMETH PhD student

University of Pécs Faculty of Business and Economics

ABSTRACT

Human Capital is hot research topic. To know more about ways how to evaluate and measure it via develop quantitative methods could add value both to theory and practice. Recognizing or measuring knowledge and skills of employees also has strategic importance. Lepak – Snell (1999) Becker (1962) and Schulcz et. al. (2013) speak in their paper about the level of motivation. A perfectly motivated employee is more valuable. But how can we measure the value of motivation? Based on Deci and Ryan's (2000) self-determination theory we should distinguish intrinsic and extrinsic motivation. Extrinsic motivation has different stadiums. The last phase of external stadium of motivation is the so called identified regulation. We have measured the levels of motivation (intrinsically and extrinsically) on a sample (N=471). In the paper, we search the answer for the question: how close identified regulation is to intrinsic motivation.

1. Introduction

Our intention is to show the relevance of self-determination theory with the help of rigorous quantitative research. People in life generally can behave passively and be alienated from their environment or on the contrary can be proactive and engaged according to their social situation in which they have been growing up and functioned. Starting research based on analyzing the social situation and human engagement Deci and Ryan (2000) decided to introduce self-determination theory (SDT), which was first developed in 1975, in order to explain those social contextual conditions that influence the processes of healthy psychological development and self-motivation. SDT is a research based theory of human development, wellness and motivation. The theory has a broad perspective and focuses on the different types of motivation while the authors pay more attention to amotivation, autonomous motivation and controlled motivation because these can be predictors of wellbeing, performance and relational outcomes. In this paper research focuses on the three main types of motivation: intrinsic (autonomous), extrinsic (controlled) and amotivation. Besides these, self-determination theory examines human beings' life aspirations, showing different relations of extrin-

sic versus intrinsic life goals to psychological health and performance. (Deci and Ryan, 2008) These are significant aspects of human capital as well because of their effects on working relationships, work performance, worker's satisfaction and the overall well-being of organizations.

Applying self-determination theory to support educational motivational theory is not a new idea. Reeve et al (2002) have used SDT to explain why intrinsic motivation is important in education. In this article the writers show the difference between the performance of intrinsically motivated, extrinsically motivated and amotivated university students. Reeve et al (2002) stated the theory explained why autonomously (intrinsically) motivated students have better results and the significance (benefits) when teachers can support the autonomy of students. Previously research about SDT in academic contexts was only about the motives of the students but the importance of the goals is also of a high consequence. Deci et al (2006) paid more attention to the goal contents that are communicated in schools. The current article also focuses on motivation and motives. Its relevance lies in the fact that because of the decreasing number of university students it is of utmost importance to be aware of their motivation to studies, especially from the point of view of efficiency of teaching.

2. Empirical Research

2.1. Sample and methodology

The empirical research was carried out at a Central European University in a transition country in 2014. We used the Vallerand et al (1992) and (1993) motivation-survey the "Academic Motivation Scale AMSC-28". The size of the sample was: 471 (N=471) participants were of both genders (49,9 % female, 50,1% male), 0,2 % was the difference between the two groups, the bigger group was the male one. Their average age was 22,34 with a range of 18 to 35 years. The questionnaire consisted 39 questions in which 12-12 were focusing on intrinsic and extrinsic motivation. The evaluation was based on a 1-7 scale which helped to differentiate the student groups. The essence of the research was to find out why the students apply to universities.¹

We are focused on different students groups, that is:

- 38 students were members in the special elite study group entirely run by students;
- 40 participants were foreign students, who had relationships with the university where the research was carried out, and who studied on any foreign language;

¹ The research idea came from a research group in at the University of Pécs. The leaders of this research group were Associate Professor Zsuzsanna Kispál-Vitai and Professor Gábor Rappai. The statistical analyst was Gábor Haraszty (MA student), and the contributor was Mariann Benke (teaching assistant).

- 31 students were incoming Erasmus-students, who studied at least one semester long at the university where the research was carried out;
- 193 participants studied at the university's business school in Hungarian at master level;
- 96 participants studied at the university in Hungarian at bachelor level;
- 73 students studied at the English language business program of the university – level was mixed both bachelor and master, because the research looked at motivation in correlation with language.

In this paper our hypothesis was that students who obtain good results undergo a process from extrinsic to intrinsic motivation. We will show different tables these were developed with the help of the IBM SPSS Statistics 20 software. We will show the results of the research with extrinsic motivation intrinsic motivation and amotivation.

2.2. Results

We created three groups from the student's answers as a technical solution. In the first section, there are those students who gave a range from 5 to 7 on the scale, we indicated this group with 1 in the SPSS software. In the second section, there are students who gave an average range 4, we denoted this group with 2 in the SPSS software. In the third section there are the students who gave from 1 to 3, we specified this group with 3 in the SPSS software.

Table 1.: Extrinsic motivation, Descriptive Statistics (2014)

	N	Minimum	Maximum	Mean	Std. Deviation
What was your Grade Point Average in the last two semesters?	85	2,00	5,00	3,7333	,74540
How many hours do you spend with learning at a week?	112	1,00	40,00	7,8214	6,50186
Valid N (listwise)	85				

(Research Group University of Pécs 2014)

In the first table you can see the results of the extrinsically motivated students. As it can be seen there were 112 students from the sample of 471 who were extrinsically motivated (The explanation of how this was determined is outside the scope of this paper). However for the question of what was your grade point average in the last two semesters only 85 answered this is showed by the row of valid N. The averages of these students were between 2 and 5 and the mean was 3.733. The standard deviation is relatively low in this case because the range is 3 (5-2) but the standard deviation is 0.7454 which means that most of the averages of the students were this close to the mean. All of the extrinsically motivated students answered the second question: how many hours do you spend with learning at a week. In this

case we can see a bigger difference between the lowest number of hours and the highest. Every student spent minimum 1 hour per a week with studying but there were students who spent 40 hours which means studying is their full time job. But these are extreme cases, as it can be seen from the mean, the average number of hours what these students spend with learning is 7.8214. The standard deviation is 6.50186 which means most of the students spend more than 1 hour (7.8214-6.50186) but less than 15 hours (7.8214+6.50186) with studying. In the next table you will see the results of those students who have intrinsic motivation.

Table 2.: Intrinsic motivation, Descriptive Statistics (2014)

	N	Minimum	Maximum	Mean	Std. Deviation
What was your Grade Point Average in the last two semesters?	55	3,00	5,00	4,0676	,63216
How many hours do you spend with learning at a week?	66	1,00	80,00	10,6970	11,82041
Valid N (listwise)	55				

(Research Group University of Pécs 2014)

In this second table the statistics describes intrinsically motivated students. As it can be seen 66 students have intrinsic motivation from the 471 sample. Only 55 answered the first question which was about their grade point average. In case of these students the averages are higher than in the case of students with extrinsic motivation. The range of grade point average is between 3 and 5. The mean of these students is higher than 4 which is a relatively high number if we take into consideration that the best grade they can get is 5. The table indicates the standard deviation as well which shows that most of the students had more than 3.3 and less than 4.7 grade point average in the last two semesters. In case of the hours what these students spend with learning the difference between the lowest number of hours and the highest is much bigger. There are students who spend only 1 hour per week with studying but there are extreme cases in which a student studies 80 hours per week. The mean is between the two and much more closer to the 1 than to the 80: it is 10.697. The standard deviation is 11.8204 which means, that there are more students who spend more than 10.697 hours with studying than students who spend less.

At the beginning of this research the goal was to show the differences between students with extrinsic and with intrinsic motivation. In the course of the analysis the authors realized the fact that the importance of amotivated students is as important as the previous two. In the following table the reader can see the results of the amotivated students- that is those students who have no motivation to study whatsoever, who just exist in the university environment.

Table 3.: Amotivated students Descriptive Statistics (2014)

	N	Minimum	Maximum	Mean	Std. Deviation
What was your Grade Point Average in the last two semesters?	10	2,30	4,80	3,2700	,73492
How many hours do you spend with learning at a week?	10	1,00	15,00	5,4000	6,63660
Valid N (listwise)	10				

(Research Group University of Pécs 2014)

Probably this table is the most interesting one in this research. We found only 10 students who are amotivated from the 471. All of these students answered both of the questions which are significant for us. The grade point averages of these students are between the other two groups. The minimum average is 2.3 which is higher than in case of student with extrinsic motivation (2) but lower than a student with intrinsic motivation (3). The maximum grade average point is lower than 5 which show the relevance of this question. Because of this low number the mean of the averages is lower than in the previous questions (3.27). The standard deviation is 0.73492. Students who are amotivated spend less time with learning. Their maximum hour what they are willing to spend with studying is 15 hours and the mean is much lower than in the previous cases because it is 5.4 which is lower than extrinsically motivated students (7.8214) and intrinsically motivated students (10.697).

In the following table the article introduces the statistics of the whole sample. As it can be seen on the next page from 471 students only 376 gave answers to the question which was about the grade point average. Because of that we were able to analyze only the result of those students. The grade point average has a minimum level at 1.7 and a maximum level at 5.1. The mean is 3.6793 and the standard deviation is 0.80975. In case of the hours what students spend with studying the range is exactly the same with the range of the intrinsically motivated students because these groups show the extremes for this question.

Based on the previous results we can state that there are students who are not amotivated and still not able to perform over a 2 point average. This is the time when we have to say that in this research we were looking for the extremes and we were able to group people into 3 main categories but these are only the extreme end of extremely motivated students.

Table 4.: Total sample, Descriptive Statistics (2014)

	N	Minimum	Maximum	Mean	Std. Deviation
What was your Grade Point Average in the last two semesters?	376	1,70	5,10	3,6793	,80975
How many hours do you spend with learning at a week?	471	1,00	80,00	8,1529	8,26695
Valid N (listwise)	376				

(Research Group University of Pécs 2014)

The number of hours what students spend with studying is the highest in case of intrinsically motivated students. The grade point average of students having extrinsic motivation is lower (3,733) than the grade point average of students having intrinsic motivation (4,067).

3. Conclusion

We can see from this research that most of the students have some level of motivation between extrinsic and intrinsic motivation (we have only 10 students who have amotivation). We present the model of Deci and Ryan (2000) in the appendix. It is also interesting how we can motivate students who have amotivation, but that is the aim of another paper. The question is here and for future research, how could we measure the accurate level of this kind of motivations? It could be a target of future research, because it is also interesting. If we know the level of motivation we can use a diverse array of motivational tools to create extrinsic motivation.

Another interesting question is: Is intrinsic motivation makes employees cheaper for the company? Will an intrinsically motivated person be more valuable for a company, or an intrinsically motivated student will really have better results at the university, or how much it matters? This research would be the target of our second paper. We want to justify that the person who has intrinsic motivation is a more valuable student for the university and also a more valuable employee for a company.

Becker (1962) and Schulcz et al (2013) agree that the most valuable people at a company are properly motivated. We want to prove that intrinsically motivated people are properly motivated, and we want to justify as well that intrinsically motivated students have better results, add more value to and receive more value from education than those who are extrinsically motivated.

APPENDIX

Table 1.: The Self-Determination Continuum

Behavior	Non-self-determined					Self-determined
Type of Motivation	Amotivation	Extrinsic Motivation				Intrinsic Motivation
Type of Regulation	Non-Regulation	External Regulation	Introjected Regulation	Identified Regulation	Integrated Regulation	Intrinsic Regulation
Locus of Causality	Impersonal	External	Somewhat External	Somewhat Internal	Internal	Internal

(Deci – Ryan 2000)

REFERENCES

- Becker, G. S. (1962): Investment in Human Capital: A Theoretical Analysis, In: The Journal of Political Economy, 1962/5. No. pp. 9-49.
- Benke, M. – Haraszty, G. – Kispál-Vitai, Zs. – Rappai, G. (2014): Empirical research on a Central European University in a transition country in (2014), Research Group University of Pécs 2014
- David P. Lepak – Scott A. Snell (1999): The Human Resource Architecture: Toward a Theory of Human Capital Allocation and Development, In: Academy of Management Review, vol. 24, no. 1., pp. 31-48.
- Deci, Edward L.; Ryan, Richard M. (2008): Self-determination theory: A macrotheory of human motivation, development, and health, Canadian Psychology/Psychologie canadienne, Vol 49 (3), Aug 2008, pp. 182-185
- Deci, L. E. – Ryan M. R. (2000): Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being, In: American Psychologist 2000/1. No. pp. 68-78.
- Maarten, V. – Willy L. – Edward L. D. (2006): Intrinsic Versus Extrinsic Goal Contents in Self-Determination Theory In: Another Look at the Quality of Academic Motivation Educational Psychologist, vol. 41, No. 1.
- Reeve, J. – Deci, E. L. (Ed) – Ryan, R. M. (Ed) (2002): Self-determination theory applied to educational settings, Handbook of self-determination research. University of Rochester Press, Rochester, NY, US pp. 183-203.

- Schulz, E. – Chowdhury, S. – Van De Voort, D. (2013): Firm productivity moderated link between human capital and compensation: the significance of task-specific human capital, In: Human Resource Management 2013/3. No. pp. 423-439.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C, & Vallieres, E. F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. Educational and Psychological Measurement, Vol.53, 159-172.A
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Seneca], C, & Vallieres, E.F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. Educational and Psychological Measurement, Vol. 52, 1003-1019.