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MOTIVATION OF Y-GENARATION RESEARCHERS IN THE AGRICULTURAL SCIENCES

MOTYWACJA BADACZY Z POKOLENIA Y DZIAŁAJĄCYCH W OBSZARZE NAUK ROLNICZYCH

Key words: motivation, researchers, Hungary, Y-generation

Slowa kluczowe: motywacja, badacze, Węgry, pokolenie Y

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Abstract. As a result of our ageing society, finding the right workforce and keeping it motivated successfully in the long term is becoming increasingly challenging and it is not any different in the field of agricultural research. The authors have carried out exploratory research in the subject of motivation at the workplace amongst the young researchers participating in the Researchers Recruitment Programme of the National Agricultural Research and Innovation Center. Our questions are: What social background do those who choose this scientific career path have? Which factors motivate young researchers to choose this profession and which factors discourage them? In this article, the authors seek to find the answers to these questions and reinterpret Herzberg's theory by addressing the Y-generation agricultural researchers.

Introduction

Businesses in Hungary also recognize the fact that the labour market is undergoing significant changes. Not long ago, the competition was greater between employees which has changed so much that nowadays the competition shifted towards the side of the employers. As the environment is changing the behavior and needs of people are also changing. In the last decades sociological researches which seek to describe certain generations have come to the fore. Nowadays, the Y-generation has become the center of attention due to two reasons. On one hand, more and more people of the Y-generation are entering the labour market, and at the same time their number is increasing in management positions. It is projected that within 5 years 50 percent of management positions will be taken by people of this generation [Mizsur 2016]. On the other hand, it is also a problem that there is not enough suitably qualified employee to satisfy the needs of businesses, and that in recent years young gradautes of the Y-generation tend to take job opportunities abroad [Mizsur 2016].

To demonsrate the number of persons employed by age group in Hungary we have to imagine a pyramid. The highest employment rate which is represented by the 40-50 age group is at the peak, the number of younger and older employees are around the same, however their number is significantly lower than that of the middle-aged employees [HCSO 2016]. The question arises who will replace the middle-aged employees currently being at the peak of the pyramid in the future?

Businesses began to recognise that they need to make their companies and the jobs they offer more attractive for which they have to create their branding in order to be able to recruit and keep competent employees with high level of knowledge who meet their requirements. Herzberg's question from 1968 „How do you install a generator in an employee?" is still relevant today. In order for an organization to have adequate quality, quantity of human capital with high level of motivation should not ignore the effects of generations. Based on these information, the authors in this article examine the social background and motivation of the Y-generation researchers. As a result of the examination, numerous elements will be discovered which will help agricultural research organizations to shape their human resources strategy in line with today's challenges.

Theoretical background

From manager point of view the aim of understanding motivation is to examine the reasons and drivers behind employee behaviour in order to be able to predict and influence the behaviour of the employees so that individual goals and organizational objectives can meet [Takács et al. 2012].

Frederick Herzberg in his model grouped the factors of job satisfaction and dissatisfaction. He recognized that the opposite of the employee who is not satisfied with his/her job is not the employee who is satisfied with his/her job but who is not dissatisfied with his/her job. He distinguished the basic biological needs (hygiene) and specific needs that arise from being human (intrinsic motivator). The factors causing satisfaction is related primarily to the content of the work, the cause of dissatisfaction connected with working conditions. It should be emphasized that most of the factor can be motivator and hygiene factors too [Gyökér 2015, 2016]. According to F. Herzberg motivation is not what comes from external feedback but that comes from intrinsic motivation [2003]. The motivator factors are interpreted as non-cash compensation [Bakacsi et al. 2004].

What is a hygiene and an intrinsic motivator (motivator) factor depends on the individual's inner requirements, qualification, living standard which can be related to societal and economic development, cultural specifity and socialisation. From Herzberg's model it can be concluded that motivating through hygiene factors does not cause real motivation, however shortage of these factors decreases loyalty to the organisation Abraham Maslow [1943]. According to his theory, motivator factors cannot make positive impact until hygiene factors do not reach a level. F. Herzberg did not deny this conclusion of the A. Maslow theory either. As result of understanding both theories we can see that hygiene factors could neutralize motivator factors.

The „motivation potential" of working was first described in the article of Richard Hackman and Greg Oldham [1975]. In their model they connected it to the job distinguish job characteristics, identifiability of the task, importance and significance of the task and the autonomy.

Based on analyses so far, experts agree that Y-generation employees grew up in a consumer society, so their attitude towards work evolved accordingly. It can be said that Y-generation employees are „consumers of work" and are looking for the „flow" experience during daily work.

As a consequence of the drastic population growth and climate change we face challenges that put agricultural research and the related researchers on a strategic level. In Horizon2020 food security, sustainable agriculture and forestry, marine, maritime and inland water research and the bioeconomy became a separate priority area. Because problems are becoming more and more severe it puts increasing pressure on agricultural research.

Material and methods

Our research is based on primary database. Data have been collected through a questionnaire in June of 2016 to identify the factors playing key role in the motivation of Y-genaration researchers in the agricultural sciences. The respondents are young researchers in the Researchers Recruitment Programme (Programme) of the Hungarian National Agricultural Research and Innovation Centre. The online questionnaire helped to collect information from 33 Y-generation researchers. The questionnaire is based on Herzbergs' motivation model, elements of R. Hackman and G. Oldhams' [1975] and the specificities of Y-generations researches. The 65 factors were classified in 17 groups. The 65 factors were queried on satisfaction, dissatisfaction and the respondent's current work place. The individual elements are measured at the 5-point Likert scale. The results are not representative of the Hungarian Y-generation agricultural researchers because respondents were not included from the Hungarian Academy of Sciences, the agricultural universities and the corporate sector.

Results

The questionnaire was filled out by 33 people, out of the 42 members of the Programme 78% of the respondents are women. The table 1 shows the distribution of the respondents by the birth date. The date of birth defines the generation of the person. The Programme is only available for young people under the age of 36. Each employee of Programme is member of the Y-generation.

Only 48% of the respondents did not participate in scientific competitions during their academic studies. 21% of the respondents participated once, 30% of them more than once or regularly participated in scientific competitions. This shows that students who attended the Programme during their higher education participated in scientific competitions in greater percentage than students in higher education. It follows that to find the right future employees for research institutions cooperation with higher education institution is needed to offer scientific research scholarships, mentorship or research infrastructure. It is recommended for research institutions to participate in already well-known academic competitions in Hungary as sponsor or jury member to have a direct connection with talented and ambitious young people for efficient recruitment.

Table 1. Distribution of birth year of survey participants
Tabela 1. Częstotliwość dat urodzenia respondentów

Year/*Rok*	1981	1983	1985	1986	1987	1988	1989	1990	1991	1992
Capita/*Liczba*	1	2	2	1	6	6	8	4	2	1

Source: own calculation (2016) N = 33
Źródło: obliczenia własne (2016 r.) N = 33

The education of parents was also queried, assuming that the parents' education level and interests effect the children choice of the research careers. This kind of connection was not found in the sample during correlation analysis.

Amongst the respondents 8 persons have teachers in their family, two of them said that this influenced their career choice. 1 person has researcher in his family but the respondent does not believe that this has effected his career. 27% of young researchers have known researchers before their career choice.

Amongst the 65 factors examined, 2 factors are hygiene and 5 factors are motivative factors. The other factors behave as hygiene and motivative factors as well. It should be noted, however, that satisfaction is mainly made by motivational factors, while dissatisfaction is the result of hygiene factors [Herzberg 2003].

Hygiene factors which are responsible for the level of dissatisfaction are in connection with utilization of social networks and flexible deadlines. The National Agricultural Research and Innovation Center and the Researchers Recruitment Programme both have web pages, however only the research institute is present on one of the leading social networks but with low number of „likes". Neither the research institute nor the Programme is present on a professional type of network. In order to make the Programme successful, the development and continuous updating these channels are necessary. It could constitute an additional motivation if young researcher's

Table 2. Highest educational level of parents of the respondents (capita)
Tabela 2. Najwyższy poziom wykształcenia rodziców respondentów (liczba)

Specification/ *Wyszczególnienie*	Highest educational level of/ *Najwyższy poziom wykształcenia*				
	qualification/ *kwlaifikacje*	graduation/ *szkoła średnia*	college/*szkoła wyższa*	university/ *uniwersytet*	doctorate/ *doktorat*
Mother/*Matka*	9	7	10	5	2
Father/*Ojciec*	8	11	4	10	0

Source: own calculation (2016), N = 66
Źródło: obliczenia własne (2016 r.), N = 66

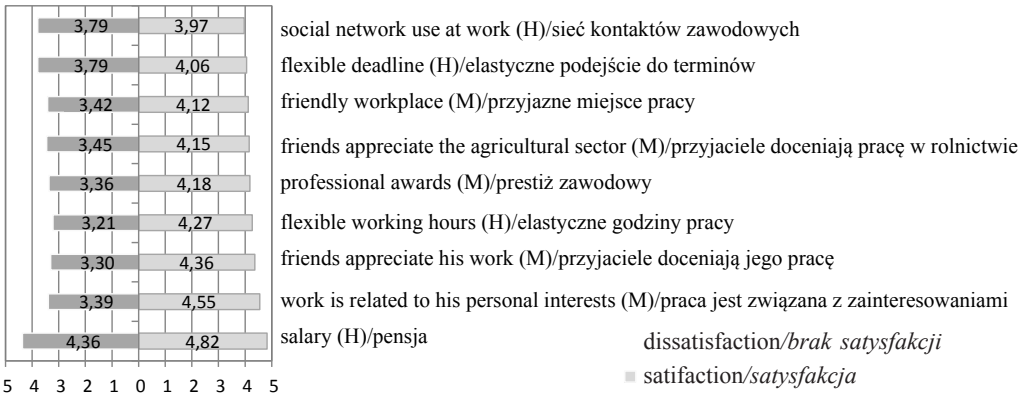

Figure 1. Factors of Complacence and Discontentment in the Y-generation Agricultural Researchers N=33
Rysunek 1. Czynniki samozadowolenia i niezadowolenia w pokoleniu Y badaczy z obszaru badań rolniczych, N = 33
Source: own calculations (2016)
Źródło: obliczenia własne na (2016 r.)

occupation is related to their personal range of interest or their friends appreciate the job or the industry which they are working for. Friendly workplace and flexible working hours can be motivating factors as well. In Hungary the atypical employment forms are not expanded, because of the lack of information, the missing elaboration of legal environment and financial sources, furthermore the traditional working culture used by elder generation does not support that neither. Moreover professional rewards have also a positive effect on young researcher's motivation.

Among hygiene and motivative factors one should be emphasized, that is the salary. When examining responses to motivative factors, the average was 4.82 and deviation was 0.36. The same terms considering hygiene factors were 4.36 and 0.69. We can clearly see that salary plays an important role in the life of young people. To the question which amount of salary they consider reasonable, responders have mentioned 640 EUR net, which is above their actual wage average. 63% of young researchers find their wages insufficient.

Nowadays the role of the network of relationships and teamwork are more and more important. As the market competition between firms took over by the supply chains compete, competition between individual researchers turned over by competition between teams of researchers. The

Table 3. Frequency of travelling inland and abroad
Tabela 3. Częstotliwość podróżowania w kraju i zagranicą

Specification/*Wyszczególnienie*		Travel inland [capita]/*Podróże krajowe [osoby]*			
		annually/ *corocznie*	more than twice a year/*więcej niż dwa razy w roku*	every half a year/*co pół roku*	less than once a year/*mniej niż raz w roku*
Travel abroad/ *Podróże zagraniczne*	annually/*corocznie*	0	5	1	0
	more than twice a year/ *więcej niż dwa razy w roku*	0	2	0	0
	every half a year/*co pół roku*	0	1	0	0
	less than once a year/*mniej niż raz w roku*	7	4	4	9

Source: own calculation (2016) N = 33
Źródło: obliczenia własne (2016 r.) N = 33

race was quite serious for a long time only within the borders of one country, but now it becomes more varied compete among continents. It is therefore important to examine the researcher's possibilities to travel to promote the construction of the network of international research, which fundamentally affect the research opportunities, and results.

In order to explore young researcher's existential possibilities, the frequency of their domestic and foreign travels have been examined. 9 persons have travelled less than once a year inland and abroad. 7 persons can afford to travel within the country at least once a year, while abroad is still a rare option. The other respondents have much better travelling ratio, if not abroad but within the country.

Conclusions

Understanding the motivation of a generation from human resources perspective has dual purpose. On the one hand it is necessary to win new work forces to the organizations operation and development; on the other hand the long-term efficient and successful employment of existing employees are essential.

Although the sample was not representative, result has shown that the education level of parents or examples of researchers and teachers found among family and friends did not influence the carrier choice of current Y-generation of agricultural researchers.

In turn, participation of young researchers to scientific competitions and its frequency during their studies has forecasting ability. When examining satisfaction and dissatisfaction factors of young people, special Y-generation's characteristics appeared, such as using social networks or flexible working-hours. Loyalty of Y-generation's employees could be motivated in the long-term by adapting flexible working-hours at the organizations working schedule and culture.

The use of social networks which started with keeping in touch with friends and sharing content has important role in professional contacts and information flow as well. The Y-generation is the forerunner of the Z-generation. For the young people of the Z-generation immediate collection and sharing of information is normal. Research institutes must exploit the opportunities provided by social networks in order to reach young generations.

Young researchers are clearly satisfied and motivated if their research fields are related to their personal interests. During the recruitment and specialization of young people, the mentors and the organisation need to pay attention to getting to know the person and his/her interests so that the young scientist get assigned with the most suitable task.

In case the young researcher is appointed with a suitable task related to the personal interest, it is such a strong driver that positive results can be expected as he/she will solve difficulties more easily. A homely atmosphere at the workplace enhances this effect.

Conclusions about Y-generation in scientific literature stating that external feedback greatly influence the motivation of young researchers is true in the sample of 33 people as well. This statement is opposite to Herzberg's finding which states that motivation can not originate from external source. The organisation should apply rewards that support the success of the work such as financing participation on professional conferences, travels, summer schools. The above leads to the conclusion that self-fulfillment and the result are what drive the examined generation the most, so the actual work, the organisation and the reputation of the sector are also worth supporting because they influence the motivation of the new generations. Analysing the results showing the living standard and wages, young researchers do not find the wages and travelling reasonable and sufficient to establish an improving background with financial reserves.

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Streszczenie

W wyniku starzenia się społeczeństwa znalezienie odpowiedniej siły roboczej i utrzymanie jej przez odpowiednią motywację na dłuższy okres staje się coraz bardziej trudniejsze. Sytuacja taka występuje także w dziedzinie badań rolniczych. Przeprowadzono badania rozpoznawcze na temat motywacji w miejscu pracy wśród młodych naukowców uczestniczących w programie „Rekrutacja Badaczy Narodowego Centrum Badań i Innowacji Rolniczych" na Węgrzech. Stosując teorię Herzberga starano się znaleźć odpowiedzi na pytania dotyczące motywacji młodych badaczy w zakresie nauk rolniczych.

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