

EMPLOYEE PROPENSITY TO PROFESSIONAL DEVELOPMENT AND ITS MEASUREMENT

Alena IVANOVA

SGH Warsaw School of Economics, Institute of Human Capital; aivanov@sgh.waw.pl,
ORCID 0000-0003-3082-1558

Purpose: The aim of the publication is to attempt to define and operationalise the term employee propensity to professional development as well as to present the tool for measuring it.

Design/methodology/approach: To achieve the goals the author conducted Polish, English and Russian literature review and online survey (CAWI). The survey sample was 600 people (303 women and 297 men).

Findings: It is clear based on results that the tool is characterised by a high level internal cohesion (Cronbach $\alpha = 0,908$), the accuracy of measurement is relatively high and will allow for valid conclusions. Satisfactory levels of Kaiser-Mayer-Olkin coefficient of adequacy of the choice of variables confirm the above.

Originality/value: The fact that diagnosis of employee propensity to professional development does not require specialist psychological knowledge is a significant asset of the developed research tool. Thus, there are no additional costs for the organisation related with employment or contracting adequate specialist.

Keywords: professional development, propensity to professional development, management, indicator.

Category of the paper: research paper.

1. Introduction

Professional development is a process that takes place during most of human life and consists of the development of professional interests and skills which in turn is to widen and/or deepen knowledge and skills in a given area. Propensity to professional development plays an important role in that process and is conducive to, among many, one's activity aiming at gaining and deepening knowledge.

Organisational development is closely related with the development of its employees. Current dynamics of change in the environment is so high that the issue of employee professional development directed at specific needs of the organisation and determining employees whose development can increase its human capital value are getting particularly significant for the success of the organisation.

The article attempts at the definition and operationalisation of the term *employee propensity to professional development* as well as presentation of the tool for measuring it.

2. Chosen definitions of „propensity” in philosophy, economics, psychology, and management and quality sciences

The term *propensity* is relatively rarely used in literature and is not clearly defined. The analysis of Polish, English and Russian sources indicates that propensity is often considered equivalent with some personality traits which are conducive to interest, action and drive towards a defined direction in a method characteristic for a person (Doszyń, 2013). The term *propensity* can also be used in literature without explanation. Researchers indicate only its „direction”, i.e. define what is the purpose of propensity, e.g. propensity to share knowledge (Walczak, 2021), propensity to success (Hozer, Doszyń, 2004), propensity to risk (Tyszka, Domurat, 2004). Some authors explain propensity as willingness to negative behaviours (counterproductive) like theft at work, sabotage, purposefully being late or inappropriate performance of one's duties (Szostek, 2018).

From the philosophical perspective human propensities subjectify human attitudes towards thoughts, actions, things etc. (Doszyń, 2008). Kant considered human propensities equivalent to will based on sensory perceptions. According to Shaftesbury propensities are motives explaining human behaviours (Shaftesbury, 1999).

The term propensity can also be found in economic literature, most often in the context of extreme propensity to consumption, saving and import.

In his treatise entitled *The Wealth of Nations* Smith lists among stable characteristics of human nature a human propensity to beneficial exchange which is the source of the division of labour resulting from the development of personal skills, agility and knowledge (Przybyła, 2005; Smith, 2020). The definition of propensity to consumption was introduced to macroeconomic research by Keynes. According to Hozer and Doszyń (2004) the analysis of human propensities is of great significance in the recognition of the economic capital of a country or region. During studies on human propensities in the economic process researchers concluded that propensity is an attitude of something or someone towards something or someone resulting in the increase of probability of particular events.

In psychology there is no cohesive understanding of the term propensity. However, a lot of researchers believe it to be one of the most significant detriments of human development which awakens dormant forces, mobilises to action and deliberate recognition of the value of those actions (Miasishchev, 2011; Leits, 1976). In the theory of individual psychological differences by Teplov (1954) propensity was defined as a tendency to engagement in particular actions. Propensity as an attitude towards action exists because of interests and attractiveness of that action, as far as it gives happiness (Iljin, 2009). Other researchers also define propensity as an attitude, i.e. a relatively constant propensity to positive or negative assessment of a given social or physical object (Wojciszke, 2003).

The analysis of literature on management indicates that *propensity* is viewed in various ways. Juchnowicz declares propensity to development as one of employee attitudes interacting with employee professional satisfaction which is one of the components of employee competence potential (Juchnowicz, 2014). Glińska-Noweś (2010) lists propensity to sharing knowledge as one of attitudes resulting from mutual trust. Stelmaszczyk defines propensity to sharing knowledge as a person's attitude towards the issues of knowledge transmission (Stabryła, Wawaka, 2014). Propensity to development is one of employee attitudes which has a particular influence on the value of intellectual capital of the organisation in the world of fast changes and lack of stability (Springer, 2011; Lewicka, 2010).

Authors of scientific and research publications on management are relatively often concerned with the issue of propensity to risk. Sitkin and Pablo as well as Sitkin and Weingart indicate that propensity to risk is determined by personal preferences concerning risk, one's prior experiences related with successes or failures in taking risks. Propensity to risk can be modified if influenced by new experiences (Yates, 1992; Brockhaus, 1980; Sitkin, Pablo, 1992; Sitkin, Weingart, 1995). Some authors, e.g.: Glinka and Gudkova, Rachwał, list propensity to risk as one of the characteristics of an entrepreneurial employee (Kuratko, Hodgetts, 1992; Bieniok, 1998; Rachwał, 2004; Koźmiński, 2005; Glinka, Gudkova, 2011). Whereas Jajuga views it as an attitude of a person who decides to take a risk (Jajuga, 2007).

However, usually researchers do not give a definition of *propensity* but use it mainly to define affiliation (direction) with something, i.e. propensity to something. For example: propensity to team work, propensity to support others, propensity to constant increasing challenges and combatting difficulties (Filipowicz, 2014), propensity to risk (Flaszewska et al., 2013), propensity to change (Kaleta, 2004), propensity to acquire and share new knowledge (Kłak, 2010).

Apart from the above listed kinds of propensity, scientific publications also list propensity to trust defined by Dyne et al. (2000) as a dimension of personality which conditions readiness for trust or the lack of it. Jaklik and Łaguna (2015) recognise it as every person's individual and inborn characteristic often a determinant of employee behaviours in an organisation, which, among others, include making risky decisions, getting adjusted in new place of work, new team etc.

Propensity to professional development is the object of this publication. It plays significant roles in the process of professional development which takes place throughout most of one's life and consists of the development of one's professional interests and skills which is to lead to widening/ deepening knowledge and skills in a given area.

Based on management literature and achievements of other scientific fields *employee propensity to professional development is understood as employee attitude characterised by a relatively stable, general employee will for developmental activities.*

3. Methods of measuring propensity

The following methods of measuring propensity can be listed: frequency, trigonometric and survey.

Measuring propensity with the use of frequency method consists of calculating the frequency of occurrence and can be presented as follows:

$$s = \frac{m}{n} \quad (1)$$

where:

s – frequency measure of propensity,

m – number of cases of a given event,

n – number of cases in general.

Propensities are also interpreted trigonometrically as „inclination”. The inclination is measured by calculating the α angle between hypotenuse and adequate cathetus (figure 1).

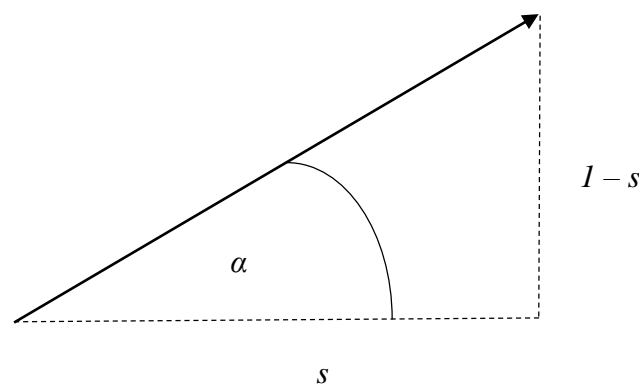


Figure 1. Trigonometric interpretation of propensity (inclination).

Source: Doszyń, 2013, p. 16.

α angle is a trigonometric measure of propensity inclination, which can be calculated according to the following dependency:

$$tg\alpha = \frac{1-s}{s} \quad (2)$$

where:

α angle tangent – measure of propensity,

s – fraction of events (persons) experiencing propensity.

α angle between 0° - 90° . If $\alpha = 90^\circ$, there is no propensity. If α decreases, propensity grows (Hozer, Doszyń, 2004, pp. 33-36).

One cathetus measures the fractions of events in a sample where the event of interest occurs (s). Second cathetus measures the fractions of events in a sample where the event of interest does not occur ($1 - s$). The less events where event of interest occurs, the greater the propensity.

Human propensities can also be measured with the use of surveys or tests. The measurement of propensity through surveys is carried out based on respondents' answers from a questionnaire. The assessment is done with the use of scale which is usually modified by researchers and adjusted to scientific issue and the means of understanding propensity.

The measurement of propensity in management sciences is usually done based on respondent's personal assessment via survey method. Gathered data are analysed based on appropriate methods of statistical inference.

Management literature does not give ready models of a research tool which allows to measure employee propensity to professional development. Literature studies allow to identify only the methods of assessing employee focus on professional development (Januszkiewicz, 2009) and readiness for learning and professional development in the workplace (Róžański, 2014) – categories also used to characterise employee developmental characteristics, as well as propensity to professional development.

It should be stressed that Róžański and Januszkiewicz assess development-oriented attitudes in the context of educational activity of adults, i.e. within the framework of andragogy. Therefore the presented method of assessment is supportive of research on the characteristics of employee developmental maturity. Whereas the analysis of propensity consisting only of the knowledge concerning relative frequency of events or the calculation of shares incredibly simplifies the understanding of the role of propensity in the creation of casual links, especially those referring to human behaviours. Therefore methods of measuring propensity presented cannot be conducive to emerging employees engaged in the improvement of competences and be a basis of the decision-making process, for example in the case of investments in employee professional development.

4. Proposal for the Method of Measuring Employee Propensity to Professional Development

All the presented definitions of propensity suggest there is no conclusive meaning and thus can be considered as conceptual notion. According to the definition employee propensity to professional development is the basis and a category directly observed and thus cannot be directly measured. The indicator of propensity to professional development is an individual meter.

Professional literature agrees that propensity is a ternary structure. It consists of three related components: cognitive, behavioural and emotional (Mądrzycki, 1977; Mika, 1982).

Assumptions and conclusions from studies¹ presented above became the basis of operationalisation of employee propensity to professional development (table 1).

Table 1.

Elements and operationalisation of propensity to professional development

Elements of propensity 1	Operationalisation of propensity 2
Cognitive	I know which qualifications/skills influence my work efficiency
	I am aware which qualifications/skills I should refine in order to reach my development goals
	I recognise when my professional knowledge becomes outdated
	I recognise when a change of the realisation of tasks would allow me for the improvement of my work efficiency
Behavioural	I was actively searching for possibilities to develop my qualifications/skills within the last 12 months
	Development of qualifications/skills allows me to undertake increasingly more complicated tasks
	I am searching for methods to realise my tasks in order to be more effective.
	I develop my qualifications/skills regardless of efforts it takes.
Emotional	Development of qualifications/skills is a source of joy for me
	Development of qualifications/skills gives me satisfaction
	I look forward to the perspective of possible development of qualifications/skills
	The effects of the development of qualifications/skills give me a sense of pride

Source: Own calculations.

¹ Research project no. 2018/31/N/HS4/01212 *Wpływ pozytywnych zachowań pracowników w organizacji na ich skłonność do rozwoju zawodowego* financed from the resources of National Science Centre.

5 degree Likert scale² was used to measure propensity, according to which the respondent has to answer to 12 statements (table 1, column 2). The calculation of the indicator consists of summing point values given by each respondent to every statement³. Maximum value amounts to 60 points. The higher the final results, the higher the respondent's propensity to professional development.

5. Results of the Validation of research tool

The research⁴ was carried out on 17-22 March 2021 with the use of CAWI. 3000 persons working in Poland and chosen randomly via SW panel were invited to participate. 1370 persons applied for participation. 600 persons (303 women and 297 men) qualified for the study because they fulfilled the requirement of being in the process of developing their professional development (e.g. trainings, language courses, post-graduate studies, temporary work in other department/ higher grade) within previous 12 months.

Majority (63.3%) of respondents had higher education, almost 1/3 had secondary education and 5.8% had basic vocational education.

Respondents varied according to the size of company. The percentage of persons employed in big companies (over 250 employees) amounted to 23%, were employed in medium enterprises (50-249 employees) – 32.2%, 30% of respondents were employed in small companies (10-49 employees), and 14.7% of respondents were employed in micro companies.

According to job division a majority of respondents were employed as non-managerial staff (61.7%), managerial staff amounted to 32.2% and 6% of respondents declared to be owners of companies.

The most numerous group consisted of respondents with working experience of 1-5 years in their current place of work (40.0%), whereas the least numerous group consisted of persons employed in their current place of work for 1 year (11.3%).

In accordance with the sector of employment 63.3% of respondents were employed in the private sector, 33.3% - public sector and 3.3% in NGOs.

The results of the analysis of correlation with the use of Spearman coefficient indicate a very weak interdependence between propensity to professional development and “personal characteristics”. However, the sign of correlation coefficient is a very interesting feature (table 2).

² Likert scale is used to measure propensity to professional development through the assessment of presented statements with 5 point scale as follows: 1 – definitely not; 2 – rather not; 3 – neither yes nor no; 4 – rather yes; 5 – definitely yes.

³ The validity of the use of summary scale confirms the correlation between the points of the scale.

⁴ Research project no. 2018/31/N/HS4/01212 „Wpływ pozytywnych zachowań pracowników w organizacji na ich skłonność do rozwoju zawodowego” financed from the resources of National Science Centre.

Table 2.
Results of correlation

	Personal characteristics		Sign of correlation coefficient	Correlation coefficient
Propensity to professional development (scale of 12 to 60 pts.)	Gender	Woman (1) Man (2)	negative	-0,16**
	Age	18-24 years old (1) 25-29 (2) 30-34 (3) 35-39 (4) 40-44 (5) 45-49 (6) 50-54 (7) 55-59 (8) 60-64 (9) 65-69 years old (10)	positive	0,01
	Education	basic vocational (1) secondary (2) higher I degree (BA, engineer) (3) higher II degree (MA) (4) higher III degree (PhD) (5)	positive	0,08
	Level	non-managerial (1) managerial (2) ownership (3)	negative	-0,01
	Working experience in current place of work	up to 1 year (1) over 1 year to 5 years (2) 6-10 years (3) over 10 years (4)	negative	-0,03
	Company size	micro (up to 9 employees) (1) small (10-49 employees) (2) medium (50-249) (3) big (over 250 employees) (4)	negative	-0,02
	Sector	private (1) public (2) NGOs (3)	negative	-0,03

** Correlation significant on the level of 0.01 (bilaterally).

Source: own calculations.

The value of Cronbach α for the whole scale in the study amounted to 0,908 (table 3).

Table 3.
Reliability statistics

Elements of propensity/aspect	Cronbach α ⁵		Number of entries
	pilot study ⁶	research ⁷	
Cognitive element	0,784	0,774	4
Behavioural element	0,752	0,795	4
Emotional element	0,891	0,875	4
Scale in total	0,864	0,908	12

Source: own calculations.

⁵ Cronbach alfa can assume values depending on the situation: from 0-1 with appropriate and common value of the coefficient being at least 0,6 and 0,9 at best.

⁶ Pilot study conducted on 24 October-10 November 2020.

⁷ Research conducted on 17-22 March 2021.

The results of the research confirm the accuracy of the scale as well as indicate its high internal cohesion even though the scale is short.

The results of the analysis of theoretical relevance in table 4 indicate good theoretical accuracy of the scale.

Table 4.
Kaiser-Mayer-Olkin and Bartlett's test of sphericity

KMO measure		0,922
Bartlett test for Sphericity	Approx. Chi-square	3436,806
	df	66
	relevance	0,000

Source: own calculations.

6. Summary

In the light of all the ways of understanding propensity presented in the article it is clear that the notion is the object of inquiry of various scientific branches – philosophy, psychology, economics, management etc. The problem with a clear and precise definition of the term does not only concern those sciences but also the representatives of those sciences. The reason being that the subject matter is multidisciplinary and complex. Therefore the term *propensity* is defined depending on scientific discipline and research needs.

It should be added that the interdisciplinarity of the concept of propensity creates a considerable scientific and research potential for its better understanding. But it can also cause difficulties in the approach to its measurement and with the interpretation of research results.

Despite ambiguity, both in understanding and definition of propensity, common features can be earmarked:

- propensity can change under the influence of external (environmental) and internal (within the person) factors,
- propensity can be a source of motivation to take action,
- propensity can facilitate forecasting reactions and explain person's actions,
- propensity can be shaped to some extent,
- propensity can be measured.

The author's method of measurement presented in the article, which incorporates the interpretation of propensity as particular attitude – and consists of such components as knowledge of the subject matter (like knowledge of competences necessary to perform tasks in a given job, need of development and knowledge of one's own level of competences), emotions accompanying the process of learning and development and behaviour towards the subject matter – allows for studying and treating propensity to professional development comprehensively.

Analyses proved the internal cohesion defined by Cronbach α , which allows to determine homogeneity of the scale, i.e. the level of one construct, amounted to 0,908, which indicates high level internal cohesion. Whereas the accuracy of measurement, i.e. assessment of the level of assumed variables measured by the tool, is relatively high and will allow correct conclusions. Satisfactory value of the indicator of adequacy of the choice of variables by Kaiser-Meyer-Olkin, as well as the results of Bartlett test of sphericity, are also a confirmation.

As one of the cognitively interesting directions of research on the issue of employees' propensity for professional development from the perspective of human capital management, it may be important to identify the key factors motivating employees to undertake development activities, taking into account their generation. It may also be important to study and identify such organisational conditions that are conducive to the increasing of employees' will for learning and developmental activities.

The fact that diagnosis of employee propensity to professional development does not require specialist psychological knowledge is a significant asset of the developed research tool. Thus, there are no additional costs for the organisation related with employment or contracting adequate specialist.

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