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Knowledge as a value

1. Introduction

Since the time of T.W. Schulz (Nobel 1979), we have been using the term "human capital" somewhat consciously, linking it to "knowledge management" and related terms. Nominally and declaratively, the role played by knowledge in the system of concepts is accepted by all, yet when it comes down to it, that is in practice – not always. This leads to knowledge being struck off priority items, and to maladjustment in the process of shaping it. Examples of this situation include less than complete efficiency of education, underestimation of knowledge-based work, ignoring the necessity to observe the rules, permanent underinvestment in knowledge building, and especially insufficient demand for high-quality knowledge.

Poland is one of the countries meeting the above description. Consequently, many people look for opportunities abroad, young people receive education which does not correspond with the employers' demands ("production of unemployment"), etc.

Why is this happening? How can we deal with it?

2. Assumptions

For something to operate efficiently, it must be faultless in all respects, also in social systems. The efficiency of an action is primarily its social meaning, and then the effectiveness, beneficiality and economy of the course and outcome of the action, in relation to the environment. For example, with regard to knowledge, actions leading to gaining knowledge must correspond with someone's essential needs (T. Kotarbiński). It is the need to possess and use knowledge that yields social meaning to the actions of developing knowledge. Knowledge-related needs are also the key factor contributing to the determination of its content, scope and other qualities. The way knowledge is shaped is related not only to the environment that benefits from the knowledge (the need for knowledge), in other words – that the knowledge feeds. In order for knowledge to be shaped, various inputs from the environment are necessary, such as finding people to educate and to be educated, as well as money and information. Besides shaping, other actions take place, interacting with it to a higher or lower extent.

Knowledge is a concept related to data, information (communication) and wisdom. On the one hand, it is built into the reservoir of external resources used by people, while on the other hand, it is the content of our brains and minds (the personal "hard drive"). Society shapes such external reservoirs, whereas each of us, with more or less external support, shapes their own "hard drive". Communities, too, have knowledge of their own ("two heads are better than one"), shaped in the course of relations among individuals and groups.

3. Demand for knowledge

Demand for knowledge stimulates the supply of knowledge. Demand is the disparity between expectation and fulfilment, the state of imbalance. The more acute the disparity, the stronger the stimulus, or motive, to regain the equilibrium and thereby accomplish the state of satisfaction. Above and below the point of equilibrium respectively, lie the fields: above – that of excess (surplus), below – that of want (deficit). The key to understating these relationships is the concept of equilibrium, uniting expectation and fulfilment as well as the sense of satisfaction. At the point of equilibrium these concepts are hypothetically absent. If I expect 10 thousand PLN/month and I get it (fulfilment), then I also get complete satisfaction. Expectation and the other categories are fully revealed only if the state of equilibrium is at

least minimally disturbed. Without such disturbance, I am not fully aware of what I want and at what level. Only when the fulfilment exceeds the expectation (and the sense of excess emerges) or it fails to meet the expectation (and the feeling of want appears), are these categories imbued with a clear and differential meaning, sense and value. In the case of excess, I begin to expect that the fulfilment be reduced (reduction of excess), whereas with a deficit, the expectation will involve an enhancement of the fulfilment (reduction of deficit).

The equilibrium is achievable at a given level, always exceeding zero. At zero, there is no expectation, fulfilment or satisfaction, nothing is happening (inertness), there is complete indeterminateness. These categories manifest themselves when we are dealing with (perceiving, measuring, recognising) a certain, non-zero resource in relation to man. Such resource may then be rated as indifferent (neutral), unclear (if it is impossible to determine the relationship with the resource, or if there is none), positive or negative. In the case of indifference, I have no expectations with regard to the resource recognised. Positive or negative rating, in turn, means that the resource is regarded as having significance, weight, worth for the subject, there occurs tension co-determining a given relation between the subject and the resource. The subject attributes a given value to the given resource in various ways, including comparison with other resources, people, reference to a different spacetime, or a subjective standard, etc. That is why one person is happy with a monthly income of 1 thousand PLN, while another will not achieve an adequate equilibrium at 1 million PLN. Resource valuation is closely linked to its satisfying capacity, that is bringing about the state of equilibrium in various spheres that the subject considers important.

Knowledge must be of value to subjects, if there is to be a demand for it. This means that the potential of knowledge to satisfy (the volume of knowledge and its capacity to bring about and restore the states of equilibrium) the subject must have a clear and specific application. Cause-and-effect relationships between knowledge and success in other spheres must be direct, demonstrable. Of course, we can argue that knowledge is an autotelic value, but first one needs to understand the very notion of “autotelism” and the relationships between knowledge and other values deemed autotelic. For example, we can debate whether the autotelic value of “freedom” should be deemed the highest, for without freedom there is nothing, freedom is the precondition to anything and everything, including “knowledge”. Thus, freedom has the most universal application and utility, and hence its extent and value cannot be overestimated. On the other hand, though, without knowledge we cannot differentiate the notion of “freedom” – and thus we stumble upon the “chicken-or-egg” paradox. Ultimately, “knowledge” must be included together with such categories as “freedom”, whose autotelic values are equally important and among the highest (most highly valuated).

I define freedom as the capacity to determine and control one’s behaviour. Knowledge, in turn, is the capacity to recognise, assess and evaluate as well as shape one’s circumstances. They have, as potential autotelic values, a incentive value, albeit characterised by certain relativity with regard to its strength, and inertia. In the latter case, the issue at stake is the relationship between freedom and knowledge as variables dependent on other variables as well as variables independent of other dependent variables. For example, whether knowledge and freedom occur and to what extent (dependent variables) is among others a function regulating the socioeconomic system (an independent variable). Knowledge and freedom in turn (as independent variables) influence the level of socioeconomic growth (a dependent variable), whereas the regulation of the socioeconomic system will also have a role to play here, as a determinant of direction, strength and probability of said influence.

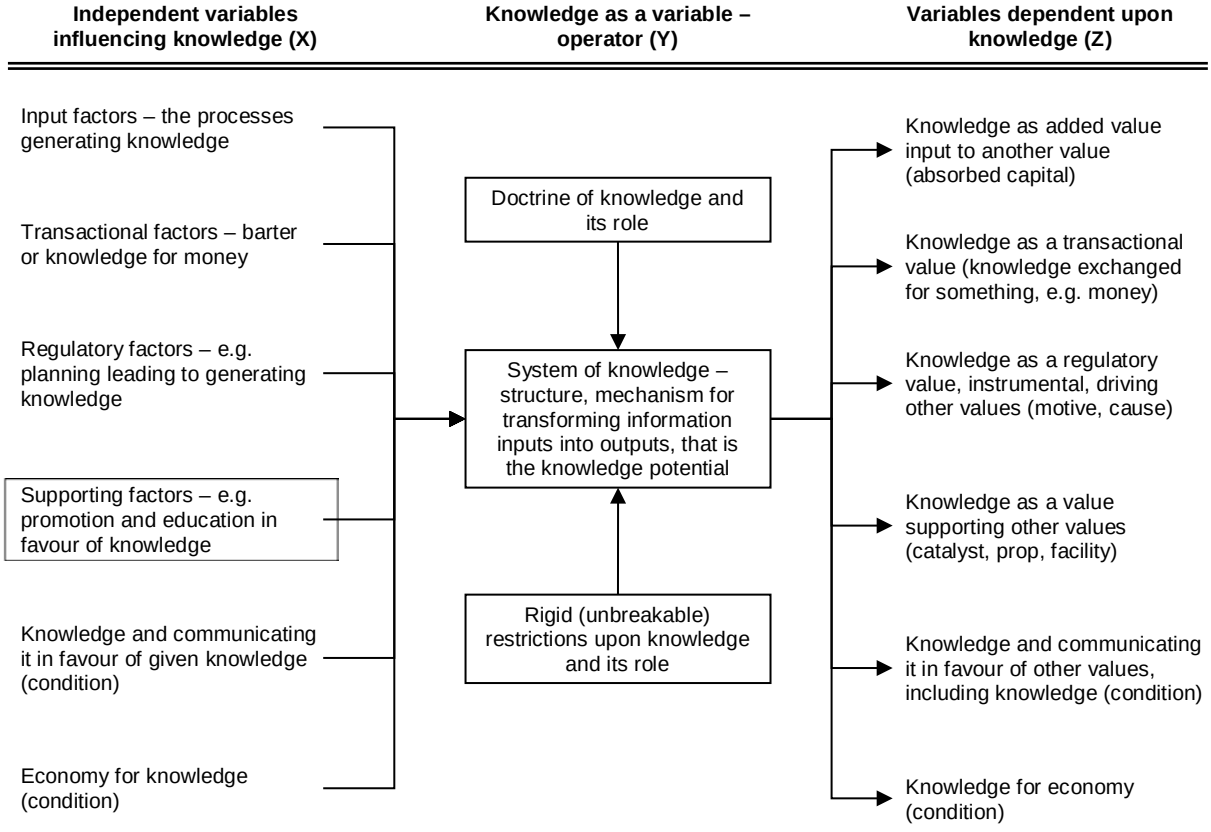
In fact, therefore, the autotelic value of knowledge is not so in and of itself, but is ultimately of a relative nature. Yet, the relationship between knowledge and other variables is

recognised by your average man in the street with some difficulty and after a certain time, that is with inertia.

4. Knowledge as a variable-operator

The level of knowledge is not a well defined concept. Intuitively, it applies to comparisons between the scope and quality of knowledge, and the potential of its application, while the distinction among levels is not clear-cut, either. This is the first cause for concern: insufficient knowledge about knowledge, or insufficient meta-knowledge or doctrine of knowledge.

I assume that the higher the volume of the knowledge resource, higher valuation of this resource and potential for its application (knowledge as an independent variable) – the higher the probability of the other values (dependent variables) increasing. This is a doctrinal assumption. Likewise, the higher the potential of independent variables influencing knowledge, the higher the probability of increasing the potential of knowledge, as a dependent variable. In this approach, knowledge can be treated as a variable – operator in a mechanism linking independent (preceding) and dependent (consequent) variables. This idea is presented in table 1.



Source: own work

Table 1. Knowledge as a variable – operator in key mechanisms

Let us take as the point of reference some given distinct knowledge as a variable – operator (Y), i.e. playing a dual role in the mechanisms of influence: a dependent variable and an independent variable. The value of a given knowledge system and the efficiency of its

influence in social mechanisms is a derivative (as presented in Tab. 1) of four groups of factors:

1) demand from variables dependent upon knowledge,
2) standing doctrine of knowledge and its role in the environment,
3) rigid (unbreakable) restrictions of given knowledge and its role,
4) independent variables, affecting given knowledge.

The demand from dependent variables (Z) for given knowledge is also conditioned by their doctrines and restrictions. Nevertheless, it is the fundamental factor determining the value of given knowledge. This is caused primarily by the perceived relationship between various functions of knowledge and the value of dependent variables. The value of these dependent variables (Z) is co-dependent upon various independent variables (Y), including the given knowledge itself. When the role of knowledge (strength of influence, direction of influence, probability of influence on the value of dependent variables) increases within the structure of these co-dependencies – the valuation of these variables also grows, and vice versa. If a given co-dependent variable achieves its value mainly due to other factors, the significance of knowledge decreases. A number of examples could be provided here, starting from relational capital (the so-called "friends in high places"), through bribes, extralegal access to capital, etc., all of which have nothing to do with knowledge (independent variables belonging in set Y, other than knowledge), whereas they can be success factors in a given field. If we perceive a clear relation between the added value input of knowledge, and the value of the action which utilises the input (dependent variables in set Z), then a cause-and-effect and incentive mechanism arises in relation to the utilitarian value of the knowledge. The subject perceiving this relation assesses and valuates the relative input of knowledge, and if its efficiency (value of the input against its cost) is higher than that of other factors, he/she chooses to go with knowledge.

The utilitarian value of knowledge affects its transactional value, as per the principles of economy. In some areas, for example in high-tech industries, services, consulting, the utilitarian value of knowledge is the key success factor. It creates supply and demand, and consequently, the price and market for knowledge. Adding to that its rarity and access to it as well as other variables, we arrive at the transactional value of knowledge.

The regulatory value of knowledge is highly significant. Understanding that it is possible to use knowledge as an instrument influencing people's values, beliefs, attitudes, culture and motives for action increases its value. It is not a recent concept to use restricted access to knowledge, indoctrination, etc. to stimulate the behaviour of individuals and communities.

Equally evident is the supporting value of knowledge. No enterprise can function effectively without the activities of measurement, records, databases. They do not present a particular value in and of themselves, yet they are necessary to complement and support other processes.

Without knowledge of adequate value, no message about it itself or about the action it serves can reach from the sender to the receiver. The application of knowledge to shape other knowledge (e.g. education) is not possible, either, without the former or without self-awareness.

Finally, economy is a particular process where knowledge finds its application. It is clear that acquiring, gathering, allocating, applying and utilising limited resources to a number of diverse goals, to realise expected benefits, is not possible without knowledge, especially of economic nature.

To sum up, the total value of knowledge is a highly complex structure, based on its use value. It is the primary factor inducing demand for the other functions related to the dependent variables of the given knowledge.

On the other hand, independent variables (X) influencing given knowledge (Y) display similar action. The subjects shaping the given knowledge system (Y) themselves generate demand for independent variables (X), while on the other hand being influenced by them. The independent variables (X) are also linked with dependent variables (Z), directly or indirectly. For example, input factors, processes generating the given knowledge system (Y) include education and self-education, also through experiencing and benchmarking (X). In the given knowledge system (Y), they can generate its component, that is didactic knowledge (Y1), which will be used to shape certain variables dependent upon knowledge, for example in the didactic process (Z – on condition that there is demand for such knowledge).

Let us also comment on the influence of economy for knowledge (a variable in the set X). It involves acquiring, gathering, allocating, applying and utilising limited resources (people, material resources, information, money) in order to shape knowledge. Without adequate outlay and economy, subordinated to the efficiency of shaping knowledge (X), a given knowledge system will not be adequate (to the needs) and sufficiently effective.

5. Levels of knowledge

Classification of the levels of knowledge is a question of doctrine. Without discussing this issue here, I shall assume three levels: elementary, medium and higher[1].

In every field of objective knowledge concerning nature, humans, science and society, one must clearly define the profile of a given level, adjusted to the subject. The subject of knowledge may be a human being, group and community as well as an institution, therefore the levels must be diversified. One must also include the reasons, values and goals of shaping knowledge. They can be completely autotelic (I study out of curiosity about the world and to further my satisfaction and wisdom), utilitarian (knowledge as a means to realising and shaping other values outside the subject) and mixed.

A leading role with regard to the society is played by higher-level knowledge. Not only does it represent a master's level in terms of reproducing knowledge, but higher-level knowledge, through anthropomorphism, opens and solves academic problems; sets the directions for cultivating knowledge, didactics and popularising knowledge; shapes the regulation of knowledge; provides the strongest impulses for improving the quality of life; acts as the nominal authority at which expectations are aimed and in which one places faith and hope.

The normative demarcation of the "higher level" has its advantages, but it needs to be accompanies by a relative reference, especially with regard to competition. My own standard of a "higher level" may pale in comparison to the level of knowledge demonstrated by a colleague (competitor) or not merit external accreditation from a universally recognised institution determining and assessing standards of knowledge.

Apart from that, an inalienable component of higher-level knowledge is self-knowledge, or self-awareness with regard to knowledge about knowledge (meta-knowledge), capability of adopting and applying a coherent doctrine of knowledge consistently, as well as the capability of detecting and tackling rigid restrictions. Low knowledge culture coupled with inconsistency and inadequacy of doctrine, the expressions of which include discrepancy between declarations and practice, clearly leads to lowering the level of knowledge.

Third-level schools are considered to be components of a professional higher-level education system. They must be included among all the variables discussed above. They

[1] Each of these can be internally divided into sublevels, for example: elementary level – primary level, universal level; medium level – junior secondary (junior high, middle school) level, senior secondary (senior high) level; higher level: undergraduate (bachelor's) degree, graduate (master's) degree, postgraduate degree (doctorate and higher).

generate knowledge (variables in the set X), they are a knowledge reservoir of sorts (Y) and they apply their knowledge to serve other activities and subjects in the environment (Z). Apart from that, an important role is to be played by other components of the professional system for shaping elementary, applied and development knowledge, i.e. other academic entities (for example, academies of sciences and research and development support facilities).

Every individual and institution must ask themselves questions regarding self-education and self-development. Should they conduct own research & development, or outsource it? Rely solely on the school or strive for knowledge on their own?

6. Conclusions and recommendations

All these findings are of doctrinal and strategic nature, and therefore they are part of politics conducted by every human individual or community as well as institutional entities. Deficient policies of knowledge and its conditioning bring about inefficient solutions of the regulatory system, with regard to increasing the value of knowledge and demand for it. This is the current situation in Poland.

The decisive factor is effective demand for knowledge, rooted in the assessment of the utilitarian value of knowledge from the point of view of dependent variables (Z). In this case, knowledge is one of the success factors in the execution of dependent variables (Z). If the efficiency assessment of other success factors (the value of those factors compared to the cost of acquiring and applying them) for the dependent variables (Z) is higher than that of knowledge, then the demand for knowledge drops. If one can run an enterprise successfully by relying on unrefined life experience, extralegal and non-ethical activities, then the interest in higher-level knowledge will be hardly perceptible, or merely formal. This can take place in the conditions of significant market imbalance (deficit), economic monopolisation, insufficient market regulation, immature business culture and policy.

As I have indicated above, knowledge as a success factor is hard to apply and utilise. Its role will increase when we all combine our efforts to bring about market balance (do away with the deficit), ensure effective competition, build a state with strong and effective regulations, create conditions in which business culture and policy can mature.

This is not all. The above, key conditions for running and managing the socioeconomic system must reach a level of maturity, at which the obvious and easy (simple) success factors lose their value, significant in an immature economy. The calculations in this respect must be total and include not only the utilitarian value of these factors but also, for example, the costs of extralegal or non-ethical application or use thereof. In this case, an entrepreneur employing people “under the table”, holding no certificates or technical approvals for their equipment, relying on networking, etc., should not be able to win against competition and succeed in business. Knowledge, as a difficult success factor, will be perceived as a key success factor, if other factors do not apply or their application is ineffective. Only in such circumstances does the time come for broader substantive innovations requiring extraordinary substantive effort in the sphere of knowledge itself. Knowledge brings: innovations making it possible to make a quantum leap forward; initial or more permanent inimitability of operating systems; more transparency in the market and risk reduction and, finally, better control of the situation.

Demand for knowledge is also positively correlated with an increase of instrumentalisation, complexity and globalisation of operations. An economy with a low saturation in modern instruments, “shallow” and structurally simple, with local connections to the global environment generates weaker demand for knowledge. Only gradual, patient development will lead to an equally gradual increase of the demand for knowledge.

Poland is not yet a socioeconomic system meeting the criteria for accelerated absorption of higher-level knowledge. Placing autonomous emphasis on knowledge and building its potential (e.g. through education) is a beneficial and necessary, but insufficient, endeavour.

Education is a supporting activity, for any other utility, but it is a fundamental activity with regard to knowledge as such (as an autotelic value). Knowledge as an autotelic value is of unparalleled importance, since it generates a feedback mechanism inducing and supporting everything outside it. Nevertheless, it is impossible to construct and apply sufficiently effective mechanisms to focus and limit oneself to autotelic education only. Hence, investing in autotelic education is essential, but must be done with prudence.

The fundamental effort should be aimed at creating the conditions for inducing demand for genuine, not apparent[2], knowledge. Under the term substantive utility I understand added value input from knowledge (Y), ultimately bringing about better quality of life (Z) and sustainable growth. It is essential to develop and implement a comprehensive mechanism: 1) inducing demand for higher-level knowledge (Z); 2) which will enhance the added value of knowledge (Y); 3) and create a need for the factors shaping and nurturing knowledge (X). The flywheel of the mechanism, and at the same time the system for verifying the quality of given knowledge (Y), as well as ultimately that of the factors shaping and nurturing knowledge (X) – must be the utility of the knowledge, particularly at a higher level (Z).

From the above point of view, we can evaluate the Polish system of shaping knowledge as insufficiently effective. The insufficient "absorption of knowledge" (Z) stems from the immaturity of the country's socioeconomic system and higher efficiency of other success factors. This produces an immature and disrupted relationship between business practice and broadly defined science (Y). Consequently, the system of factors shaping and nurturing knowledge (X), including outlay on science and education, is likewise underdeveloped and inefficient.

[2] Apparent knowledge – knowledge which does not account for any substantive added value input to the quality of life and sustainable growth. A special case of such knowledge, apart from extralegal and non-ethical "innovations", is going after and receiving school completion diplomas, which reflect shallow knowledge or merely a void. This is often a result of normative and regulatory emphasis on education which is not matched by the demand verifying the outcomes of education.