

**CAPITAL, WORK AND ECONOMIC VALUE IN THE CONTEXT OF THE FIRST AND THE
SECOND LAW OF THERMODYNAMICS**

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ABSTRACT

In the economic sciences, the duality principle applies, according to which economic objects are perceived as material assets and the abstract capital embedded in them. There is, therefore, a strong analogy with the natural sciences, where the matter-energy paradigm applies. So, objects like cars are assets, and their capital represents the ability of these cars to transport. Similarly, man has his material organism (body), but his ability of doing work, or human capital, is important. Capital is a potential category, and its dynamic aspect is manifested in work - the transfer of capital to work objects. Assets experience depreciation, which is associated with random and spontaneous dispersion of the capital inherent in them. In the case of human capital $H(p)$, research leads to the conclusion that the rate of this loss has an average value of $p = 0.08$ [1 / year]. The hypothesis that the $W(p)$ wage that compensates for this loss is fair is also confirmed. The formula $W(p) = p \times H(p)$ is the universal principle of fair remuneration and is applicable in the USA as well as in Poland, Ukraine, Kenya and Malaysia. Wherever there is a measurement of living costs and labor law. The constant "p" represents the influence of natural forces in the creation of human capital and profits from economic activity. It is the emanation of the second law of thermodynamics and determines the average rate of dispersion of human capital. This way of thinking leads to a reevaluation of many economic concepts, pointing to the complementarity of capital and labor.

Keywords: thermodynamic laws, economic constant, human capital, fair wage, duality principle.