The Employability Theorem

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Abstract

In this document, the Potential Employability Theorem is demonstrated from a set of fairly tautological axioms, which are presupposed in quantitative career choice and career development methods.

Keywords: Employability theorem; Career choice; Career development; Vocational choice; Occupational Information Network; O*NET.

1. Proof Plan

Time allocation by difficulty level:

$$\text{ta}(\bar{l}) = \frac{\text{ttc}(\bar{l})}{\int_0^1 \text{ttc}(l)dl} \tag{1}$$

Employment by difficulty level:

$$w_q(\bar{l}) = w_q \times \text{ta}(\bar{l}) \tag{2}$$

Potential employability:

$$\tilde{w}_q^k = \tilde{w}_q(l_q^k) = w_q \int_0^1 T(l, l_q^k)\text{ta}(l)dl \tag{3}$$

$$= w_q \left[\int_0^{l_q^k} 1 \times \text{ta}(l)dl + \int_{l_q^k}^1 0 \times \text{ta}(l)dl \right] \tag{4}$$

$$= w_q \int_0^{l_q^k} \text{ta}(l)dl \tag{5}$$

And with $l_q^k = \tilde{Y}_q^k = \tilde{Y}(\boldsymbol{a_k}, \boldsymbol{a_q}) = Y(\boldsymbol{a_k}, \boldsymbol{a_q})/Y(\boldsymbol{a_q}, \boldsymbol{a_q})$,

$$\tilde{w}_q^k = w_q \int_0^{\tilde{Y}_q^k} \text{ta}(l)dl \tag{6}$$