

CHAPTER 4

CONCLUSIONS AND FUTURE WORKS

4.1 CONCLUSIONS

Knowledge workers are evidently recognized as one of the most crucial factors for not only the viability of organizations but also the sustainable competitiveness of them. Consequently, the Human Resource Management (HRM) of knowledge workers or Knowledge Worker Management (KWM) cannot be overlooked and must be thoroughly treated. While the traditional HRM is focused on the management strategies or in other words on qualitative aspects of management, the research herewith introduce the quantitative aspects of KWM. The following key accomplishments have been attained from this research.

1. The mathematical formulation of management strategies and goals in terms of optimization problems. The goals are represented by the so-called objective functions. The management limitations and scopes are transformed into optimization constraints.
2. Both time-independent and time-dependent management strategies are treated.
3. A versatile and state-of-the-art optimization tool, namely Genetic Algorithm (GA) is implemented for solving the formulated problem. The implemented GA is specifically referred to as an adaptive penalty GA.

The ability in quantitative modeling of HRM and thus WKM realize the quantitative measurability of management strategies. This provides different alternatives of management strategies. Most importantly, it yields a way of estimating the consequences of prospect KWM in terms of numeric. The quantified consequences make the management strategies visible and clearly comparable. Consequently, it is more convenient in decision makings regarding alternative management strategies. Apart from the management viewpoint, the state-of-the-arts adaptive penalty GA shows its potential in handling complex situations. The versatile

applicability of GA is another novel solution tool in the domain of HRM. All of the above-mentioned aspects are the significant implications of this research.

4.2 FUTURE WORKS

The accomplishments from this research provide a fundamental step for KWM in a quantitative manner. Further researches can be extended as follows:

1. Several goals are concurrently treated.
2. More complicate and thus realistic consequences are considered. This includes the magnitude of the considered consequences
3. The present formulation has not taken the nature of uncertainty.