$$
\begin{aligned}
\max_{H,W,\Delta,\tau,J,K,A} \quad & \sum_{t=0}^{T} \beta^t \Bigg[\sum_{i=1}^{N} H_{i,t} \cdot W_{i,t} \cdot (1 - \tau_i(\cdot)) \\
& + \alpha_1 \cdot \text{median}(W_{i,t}) - \alpha_2 \cdot \big(\text{P75}(W_{i,t}) - \text{P25}(W_{i,t})\big) \\
& + \alpha_3 \cdot \text{PublicValue}(\text{PublicSector}_t) - \alpha_4 \cdot \text{PublicExpenditure}(\text{PublicSector}_t) \\
& - \alpha_5 \cdot \text{PensionCosts}(A_t) - \alpha_6 \cdot \text{WelfareCosts}(A_t) \\
& + \alpha_7 \cdot \sum_{a=1}^{A_t} \text{CoverageValue}(\text{AutomatedCenter}_a) \Bigg]
\end{aligned}
$$

$$
\begin{aligned}
\text{subject to:}\quad & H_{i,t} && \in \{0,1\} && \forall i,t \\
& W_{i,t} && = f(S_{i,t}, A_{i,t}, F_{i,t}, M_{i,t}, P_{i,t}, L_{i,t}) && \forall i,t \\
& S_{i,t+1} && = g(S_{i,t}, H_{i,t}, \Delta_{i,t}) && \forall i,t \\
& \tau_i(\cdot) && = h(A_{i,t}, M_{i,t}, P_{i,t}, W_{i,t}, \text{FinancialInvestments}_t, \text{VentureCapital}_t, \text{EmptyHouses}_t) && \forall i,t \\
& \text{PublicSector}_t && = \bigcup_{j=1}^{J_t} \text{LocalInfrastructure}_{j,t} && \forall t \\
& \text{LocalInfrastructure}_{j,t} && = \sum_{k=1}^{K_{j,t}} \text{PublicEmployee}_{k,j,t} + \text{OperativeExpenses}_{j,t} && \forall j,t \\
& \text{PublicValue}(\text{PublicSector}_t) && = \sum_{j=1}^{J_t} f_V(\text{LocalInfrastructure}_{j,t}) && \forall t \\
& \text{PublicExpenditure}(\text{PublicSector}_t) && = \sum_{j=1}^{J_t} \sum_{k=1}^{K_{j,t}} \big(\text{Cost}(\text{PublicEmployee}_{k,j,t}) - \text{Income}(\text{PublicEmployee}_{k,j,t})\big) && \\
& && \quad + \text{OperativeExpenses}_{j,t} && \forall t \\
& J_t && \in \{0,1,\ldots,J_{\max}\} && \forall t \\
& K_{j,t} && \in \{0,1,\ldots,K_{\max}\} && \forall j,t \\
& A_t && \in \{0,1,\ldots,A_{\max}\} && \forall t \\
& \text{OperativeExpenses}(\text{AutomatedCenter}_a) && = 0 && \forall a,t \\
& \text{WelfareCosts}(A_t) && = f_W\big(\sum_{a=1}^{A_t} \text{NonCashItems}(\text{AutomatedCenter}_a)\big) && \forall t
\end{aligned}
$$

Explanation:

- $\tau_i(\cdot)$: The tax rate for individual i at time t, which is a function h of the individual's age $A_{i,t}$, motivations/aspirations/personality traits $M_{i,t}$, additional individual-specific parameters $P_{i,t}$, wage $W_{i,t}$, investments in the Italian financial markets $\text{FinancialInvestments}_t$, investments in venture capital VentureCapital_t, and empty house ownership in critical areas EmptyHouses_t.

This tax policy is designed to maximize long-term wage growth by incentivizing new entrepreneurs, encouraging higher savings and investments, and identifying talented individuals. The rationale is as follows:

- By making the tax rate a function of age, motivations, personality traits, and individual-specific parameters, the policy aims to identify and incentivize talented individuals with entrepreneurial mindsets and high potential for success.
- Lower tax rates for investments in the Italian financial markets and venture capital directly incentivize such investments, which can help spur economic growth and create more job opportunities.
- Higher tax rates for empty house ownership in critical areas (e.g., high-productivity urban centers) can help reduce the cost of living in these areas, making it more affordable for talented individuals to live and work there, thereby increasing productivity and economic output.
- A_t: The number of fully automated operative centers at time t. These centers are designed to automate the production and distribution of basic need goods locally, which can then be provided as non-cash items in place of cash payments for welfare purposes.
- $\text{PublicValue}(\text{PublicSector}_t)$: The public value delivered by the public sector at time t. This function is assumed to be non-linear and subject to economies of scale, meaning that aggregating and consolidating public infrastructures and public employees can create additional value. Furthermore, public employees are cross-trained and shared with the private sector, which has a double positive effect on the public value function by increasing efficiency and generating additional income.