Variable	Description
C_1	Consumption in period 1
C_2	Consumption in period 2
l_i	Labour supply in period i
$1 - l_i$	Free time in period i
w_i	wage in period i

A person living in two periods has the following budget constraint

$$C_1 + C_2 = w_1 l_1 + w_1 (1 + l_1) l_2 \tag{1}$$

in a world, where on-job experience leads to wage increases according to rule $w_2 = (1 + l_1) w_1$ and the total available time is 1.

I claim that (1) can be rewritten as

$$3w_1 = C_1 + C_2 + 2w_1(1 - l_1) + w_1(1 + l_1)(1 - l_2),$$

where $3w_1$ is the maximum life time income of the person (exogenous), $2w_1 = w_1 + w_1$ is the price of time in period 1, based on

1. lost income from period 1, which equals $(1 - l_1)w_1$
2. the loss of income the person would suffer due to working only $l_1$if he worked full time in period 2. This loss is $2w_1 - w_1(1 + l_1) = (1 - l_1)w_1$.

and $w_1(1 + l_1)$ is the wage in period 2 only, as there is no period 3. Both prices are exogenous in their respective periods.

Proof:

$$\begin{aligned} 3w_1 &= C_1 + C_2 + 2w_1(1 - l_1) + w_1(1 + l_1)(1 - l_2) \\ 0 &= C_1 + C_2 - 2w_1 l_1 + w_1 l_1 - w_1 l_2 - w_1 l_1 l_2 \\ C_1 + C_2 &= w_1 l_1 + w_1 l_2 (1 + l_1) \end{aligned}$$

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For three periods the two equivalent (I've checked) equations are

$$C_1 + C_2 + C_3 = w_1 l_1 + w_1(1 + l_1) l_2 + w_1(1 + l_1)(1 + l_2) l_3$$

$$7w_1 = \sum C_i + [4w_1](1 - l_1) + [2w_1(1 + l_1)](1 - l_2) + [w_1(1 + l_1)(1 + l_2)](1 - l_3)$$