

$$\gamma \in : \quad \Upsilon_\nu^\# = \int_{dv}^{r\mathbb{T}^d} \frac{v\gamma}{v^{\nu+1}} \Rightarrow {}^w\gamma \in \sum_\nu^{d\mathbb{Z}} w^\nu \Upsilon_\nu^\#$$

$$\odot \supset K \text{ cpt} \Rightarrow R_-^j < \varrho_-^j = \bigwedge_w^K |w^j| \leq \bigvee_w^K |w^j| = \varrho_+^j < R_+^j : \quad {}^w\gamma \in \sum_\nu^K w^\nu \Upsilon_\nu^\#$$

$$\left\{ \begin{array}{l} R_-^j < r_-^j < \varrho_-^j \leq \overline{w^j} \leq \varrho_+^j < r_+^j < R_+^j \\ 0 < q^j = \frac{\varrho_+^j}{r_+^j} \vee \frac{r_-^j}{\varrho_-^j} \end{array} \right. \Rightarrow \overline{{}^w\gamma - \sum_{|\nu| < N} w^\nu \Upsilon_\nu^\#} \leq \frac{\overline{1+q}^1 - \overline{1+q-2q^N}^1}{(1-q)^1} \bigvee_{|v|}^{r_-|r_+ \overline{v}\gamma}$$

$$\text{Ind}_{1 \geq d} \overline{{}^w\gamma - \sum_{|\nu| < N} \dot{w}^\nu \Upsilon_{1\nu}^\#} \leq \sum_{|\nu| \geq N} q_1^\nu = \frac{2q_1^N}{1-q_1} = \frac{\overline{1+q_1} - \overline{1+q_1-2q_1^N}}{1-q_1} : 1 \leq n-1 \curvearrowright n:$$

$$\begin{aligned} \overline{{}^w\gamma - \sum_{|\nu| < N} \dot{w}^\nu \Upsilon_{1\nu}^\#} &\leq \overline{{}^{w^1:w'}\gamma - \sum_{|\nu| < N} \dot{w}^\nu dv^1 \frac{v^1:w'}{1^\nu v^1} \gamma} + \overline{\sum_{|\nu| < N} \dot{w}^\nu dv^1 \frac{1}{1^\nu v^1} v^1:w' \gamma - \sum_{|\nu| < N} \dot{w}^\nu \int_{dv'}^{r\mathbb{T}^{n-1} v^1:v'} \frac{\gamma}{v^{\nu+1}}} \\ &= \overline{{}^{w^1:w'}\gamma - \sum_{|\nu| < N} \dot{w}^\nu \Upsilon_{1\nu}^* w'} + \overline{\sum_{|\nu| < N} \dot{w}^\nu \int \frac{1}{dv^1} \frac{1}{1^\nu v^1} \left({}^{v^1:w'}\gamma - \sum_{|\nu| < N} \dot{w}^\nu \Upsilon_{\nu}^* v^1 \right)} \\ &\leq \frac{2q_1^N}{1-q_1} + \sum_{|\nu| < N} q_1^{|\nu|} \frac{(1+\tilde{q})^1 - (1+\tilde{q}-2\tilde{q}^N)^1}{(1-\tilde{q})^1} \\ &= \frac{2q_1^N}{1-q_1} + \frac{(1+q_1) - (1+q_1-2q_1^N)}{1-q_1} \frac{(1+\tilde{q})^1 - (1+\tilde{q}-2\tilde{q}^N)^1}{(1-\tilde{q})^1} \\ &= \frac{1}{(1-q)^1} \left(2q_1^N(1-\tilde{q})^1 + (1+q_1-2q_1^N)(1+\tilde{q})^1 - (1+\tilde{q}-2\tilde{q}^N)^1 \right) \\ &\leq \frac{1}{(1-q)^1} \left(2q_1^N(1+\tilde{q})^1 + (1+q_1-2q_1^N)(1+\tilde{q})^1 - (1+q-2q^N)^1 \right) = \frac{(1+q)^1 - (1+q-2q^N)^1}{(1-q)^1} \end{aligned}$$