Linear instances format

!---------------------------------General data -----------------------------------;

!Periods number;

T ~

!Number of prices (number of prices for each channel/period);

$|\Omega_{mt}|$ = 15 ~

- Ω_{mt} is the discrete set of prices in channel m and period t.

!Channels; (o: online website, b: brick and mortar, m: mobile application, c: catalog, sm: social media)

set of channels M ~

!---------------------------------Logistics data ------------------------------;

!Used capacity; (vector of T values)

1,..., 1 ~

- Normalized to one since capacity constraints are given by $X_t \leq b_t$.

!Capacity per period;

$b_1,\ldots,b_T$ ~

!Production costs;

$c_1,\ldots,c_T$ ~

!Holding costs;

$h_1,\ldots,h_T$ ~

!Setup costs;

$a_1,\ldots,a_T$ ~

!Big M;

S ~ (Available production capacity for all the horizon)

!---------------------------------Market data ------------------------------;

!Market length per period;

$\tau_1, \ldots, \tau_T$ ~

!Minimum presence per channel;

$\eta^{ch_1}, \ldots, \eta^{ch_{|M|}}$ ~

!Values of $r_{mti}(f_{mti}(P_{mti}))$; ($|M|.T.|\Omega_{mt}|$ matrix)

Example with M = {o,b}, T = 3 and $|\Omega_{mt}|$ = 5:

m = o

$t = 1$: $r_{o11}, r_{o12}, r_{o13}, r_{o14}, r_{o15}$

$t = 2$: $r_{o21}, r_{o22}, r_{o23}, r_{o24}, r_{o25}$

$t = 3$: $r_{o31}, r_{o32}, r_{o33}, r_{o34}, r_{o35}$

m = b

$t = 1$: $r_{b11}, r_{b12}, r_{b13}, r_{b14}, r_{b15}$

$t = 2$: $r_{b21}, r_{b22}, r_{b23}, r_{b24}, r_{b25}$

$t = 3$: $r_{b31}, r_{b32}, r_{b33}, r_{b34}, r_{b35}$

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!Values of q_{mti} ($\tau_t f_{mti}(P_{mti})$) ; ($|M|.T.|\Omega_{mt}|$ matrix)

Example with M = {o,b}, T = 3 and $|\Omega_{mt}|$ = 5:

m = o

$t = 1$: $q_{o11}, q_{o12}, q_{o13}, q_{o14}, q_{o15}$

$t = 2$: $q_{o21}, q_{o22}, q_{o23}, q_{o24}, q_{o25}$

$t = 3$: $q_{o31}, q_{o32}, q_{o33}, q_{o34}, q_{o35}$

m = b

$t = 1$: $q_{b11}, q_{b12}, q_{b13}, q_{b14}, q_{b15}$

$t = 2$: $q_{b21}, q_{b22}, q_{b23}, q_{b24}, q_{b25}$

$t = 3$: $q_{b31}, q_{b32}, q_{b33}, q_{b34}, q_{b35}$

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