



— Case (i): Edges on the $v_{\text{pay}}-x$ path.

== Case (ii): Edges on the $x-v_{\text{opt}}$ path.

⬆ Case (iii.a): Upward edges on the $x-\hat{v}_{\text{pay}}$ path.

⬇ Case (iii.b): Downward edges on the $x-\hat{v}_{\text{pay}}$ path.

⋯ Case (iv): Other edges of the component.

— Edges not in the component.