Designing Contracts and Sourcing Channels
to Create Shared Value

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In complex supply chains, the benefits and costs of technological innovations do not always accrue equitably to all parties; their adoption may thus critically depend on sourcing relationships and incentives. In a setting with uncertain and endogenous process yield, we study the potential of two features – contract design and sourcing channel – to create mutual benefit in decentralized value chains, where suppliers bear the costs of new technologies while benefits accrue primarily to buyers. Our focus is on agricultural value chains, where parties may transact through a channel that blends farmers’ produce (‘commodity-based channel’) or that allows a one-on-one interaction between farmer and processor (‘direct-sourcing channel’). Our study provides insights to companies seeking to incorporate responsible sourcing strategies while also creating economic value – a concept called ‘creating shared value’. We identify that the technology’s ‘cost elasticity’ drives whether switching sourcing channel, changing contract structure, or adopting an integrated change is necessary to create shared value. This highlights that value chain innovations need to be properly designed – and sometimes combined – to achieve sustainable implementation. We also find that certain simple contracts with a linear or bonus structure are optimal, while other intuitive contracts could be detrimental. Using a dataset of farms in Patagonia, Argentina, we estimate that the proposed mechanism could increase average supply chain profit by 6.9% while realizing positive environmental benefits.

Key words: supply chain management, value chain innovations in developing economies, sustainable procurement, creating shared value

History: File version March 2, 2016