

Marketing the Cycle: Improving Reverse Flows in Open-Loop Supply Chains for Independent Remanufacturing

Introduction

Industries are seeking for material supply alternatives in order to address issues of increasing demand and an increasing awareness for environmental impacts. Also policy intervenes with the objective to reduce the environmental impact of end-of-life (EOL) products. At the EOL, the reuse of products is preferable from an economic and an environmental perspective due to reused resources. One strategy for reuse is remanufacturing (reman) which is widely used in different industries because the “as-good-as-new” specification of reman products increases their marketability. However, the **reman market is experiencing supply issues** of cores (EOL products).

Supply Challenge

Closing the loop from the EOL to reman is a challenging task. **Core acquisition and the physical return add complexity to supply chains.** Remanufacturers regularly use deposits to facilitate the reverse flow of cores. They charge a deposit for a spare part and repay it in exchange for a core. But **deposit cannot solve all supply issues.**

Deposits, amongst others, ...

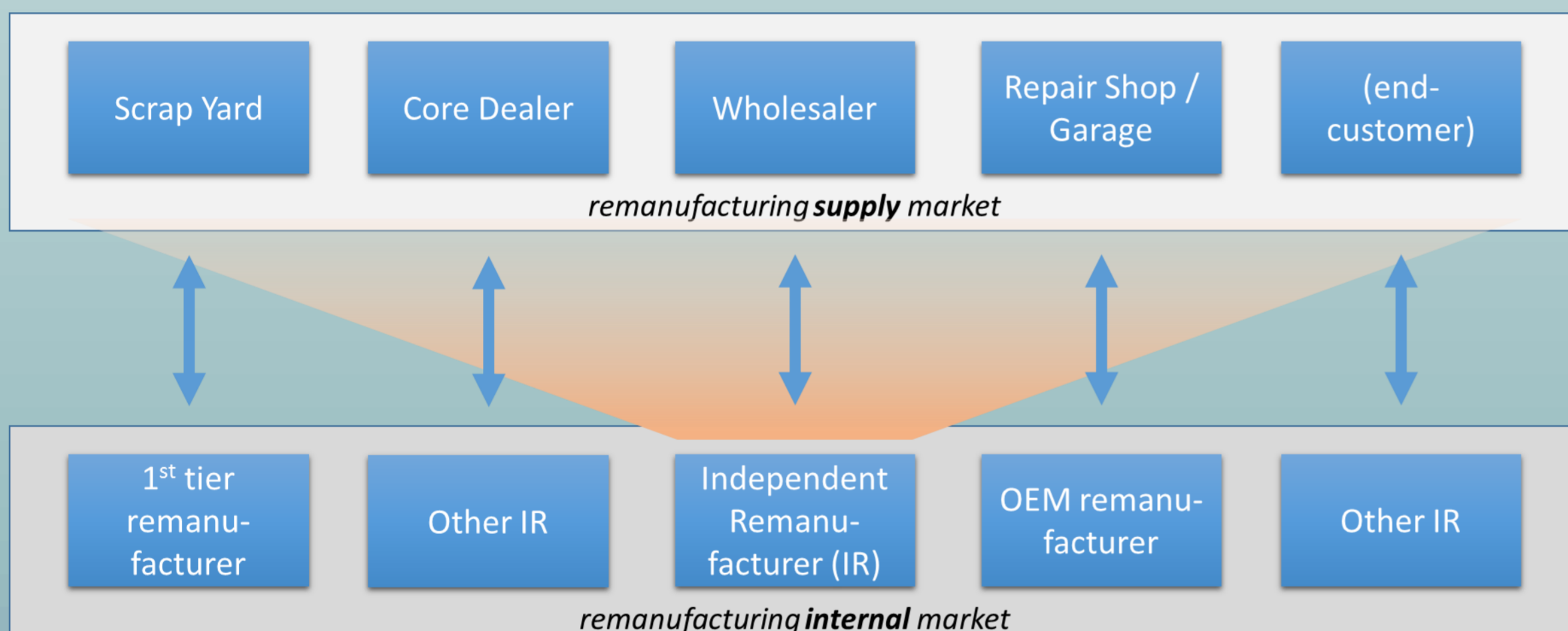
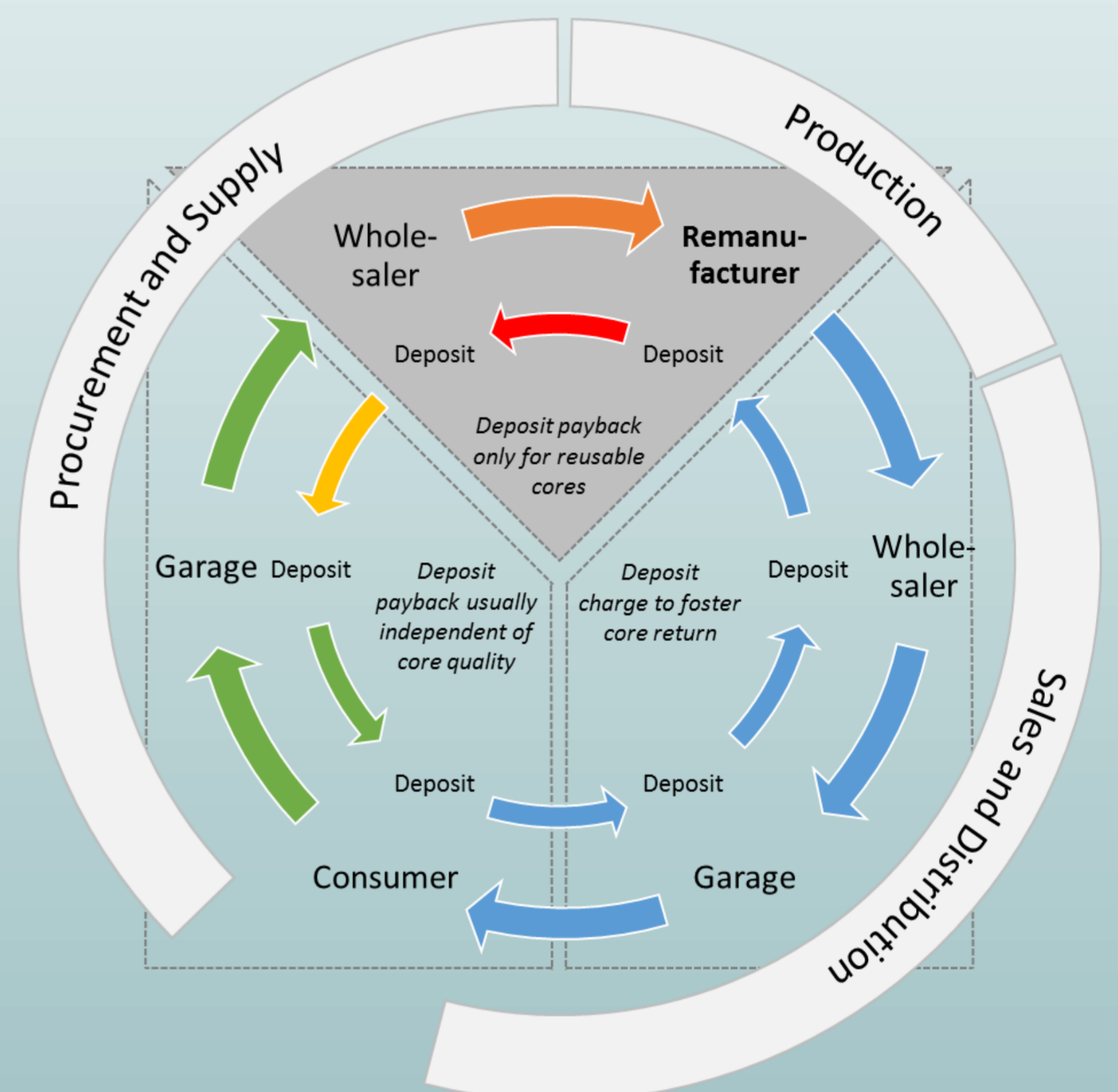
- Increase tied-up capital
- Increase administrative efforts
- Compete with the material value of cores.

For these reasons **different supply strategies** might be dominant in reman.

Research Motivation

Identifying reasons for supply issues motivates this research. Atasu et al. (2008) already mentioned that research regarding closed-loop supply chains should **return to industry practise** in order to uncover current **practical issues instead of theoretically created problems.**

From literature the use of deposits was derived as one major strategy for core supply. Though, a case study revealed interesting and somehow **contradicting assumptions regarding the use of deposits to foster core returns.** Identified discrepancies and their implications motive the further research agenda.



Procurement (Supply) Channels

Re-manufacturers experience internal rivalry on their market, while challenged by their supply market. Although, all suppliers could supply all types of remanufacturers, the mix of procurement channels usually varies and depends on the type of remanufacturers: 1st tiers and OEMs vs. Independent remanufacturers. This work focusses on the independent remanufacturer.



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The workshop is supported by EWE Stiftung **Innovationspool**