Chapter 6
Conclusions

This chapter summarizes the results of the state of the art and profit impact of RM in the manufacturing industry and also provides directions for future research.

6.1 Summary and Results

In this book, we investigated the application of RM in the PI, conducting three empirical studies, each of which started with a preliminary qualitative exploratory research totaling 75 interviews (15, 22 and 38 respectively), followed by quantitative empirical research with a total of 1206 additional interviews (124, 479 and 603 respectively) from the same number of companies from six industries of the PI, between 2004 and 2013.

Chapter 2 started with providing the key concepts discussed in this manuscript. After the description of the origins of RM, the available research on RM in the manufacturing industry was presented. We then outlined the prerequisites of its application, comparing the employment of RM in the service vs. the PI. Additionally, we discussed RM instruments relevant for the present work, i.e. price and capacity management tools. Finally, the profit impact of RM in both service and manufacturing companies was discussed.

We presented the outcome of the first empirical study on the state of the art and perspectives of RM in the PI in Chap. 3. The results from the empirical study among 124 firms show that the overall importance of RM within the process industry is regarded as high. Furthermore, the perceived importance is positively correlated with company size, time since introduction, and IT-implementation. The type of RM system employed depends on the duration of its use: RMSs shift from capacity or price control to price and capacity control. The absence of a clearly defined pricing strategy, lack of experience, and lack of adequate approaches constitute barriers to RM introduction.

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The geographic scope of the study presented in Chap. 3 was extended in Chap. 4, where the results of a quantitative study, based on 479 firms in the PI in North America and Europe, were discussed. The results show that the overall importance of RM in the PI is regarded as high and that the importance positively correlates with turnover, period of use and the extent of IT integration. The type of RM system used depends on its period of use: With increasing period of use, RM systems shift from capacity to price and capacity control. Barriers to the implementation of RM systems are seen in the absence of a clearly defined pricing strategy, lack of experience and lack of adequate approaches. Comparisons between North America and Europe indicate differences in the application of RM: In North America, RM is considered more important, was introduced earlier and is more price based.

In Chap. 5 we introduced the assessment of RM's profit impact on the PI. This chapter presented findings of a quantitative study based on 603 respondents working in PI companies in North America and Europe. RM is regarded as contributing to profit, but the results of this study show that the impact differs between North America and Europe, both with respect to the period of time RM is used and to the perception of RM. Moreover, the greater the turnover and the level of internationalization, the more likely a company is to use RM. The impact of RM in terms of profit increases with firm revenue, period of use but differs between North America and Europe. Both the *a priori* estimation of profit improvement due to RM before its introduction and the *a posteriori* realized profit improvement are positive; they increase with the period of use and differ between Europe and North America, being higher in the latter region. The main barriers to RM implementation are the lack of awareness of this approach, the inability to identify suitable systems, an unclear price strategy definition and the lack of management attention. North America and Europe assess the importance of some barriers differently. If companies decide not to introduce RM, this is typically due to the fact that other projects or activities have higher priority rather than that the benefits or potential of RM are not recognized.

6.2 Final Remarks and Future Research Directions

Despite the growing body of literature compared to when we started this work, the research on the application of RM in the manufacturing industry is far from over: While RM in the services industry has been an active field of research for more than 40 years, research on RM in manufacturing is still in its infancy. We identify four directions for future research: Leveraging technological progress to improve the application of RM and ideally develop some industry benchmarks; extending the geographical scope; extending the industry scope; and finally conducting a longitudinal study.

The technological progress presents great opportunities and according to us a first, key direction for researchers and practitioners to overcome the difficulties of applying RM in the PI. Nearly 50% of RM users in Europe have manual RMS

(Kolisch and Zatta 2012). They could probably improve the benefits and returns of RM with more technologically advanced solutions. In addition, smaller companies with regard to revenue tend not to introduce RM compared to larger companies (Kolisch and Zatta 2014). Technological progress, presenting a solution for smaller companies, could invert this trend. Finally, a technological solution could also help develop a benchmark solution in the PI that might inspire companies that today indicate that they have not found an appropriate RM approach, which is seen as a barrier (Kolisch and Zatta 2014). In the service industry success stories of single companies like that of American Airlines (see Sect. 2.2) triggered have further interest in and adoption of RM.

Second, from a geographical point of view, it would be interesting to extend the current work also to Asia, Latin America and Africa to verify the state of the art and perspectives of RM in the PI of these regions as well and to compare the outcomes with what was found in Europe and North America. It would certainly be worthwhile including the BRIC countries due to the dynamism of their economies. When doing this we recommend ensuring a sufficiently high number of respondents per country in order to assess in detail differences and peculiarities across the countries in terms of RM use and the general perception of RM.

A third future research direction would extend the research beyond the PI to other industries of the manufacturing sector. An area of interest could be e.g. the automotive sector: The achievements of Ford Motor Company in this regard seem to be very encouraging (Blumenthal et al. 2008).

Our research involved 1206 firms located in North America and Europe belonging to six industries, and therefore it is a cross-country analysis. However, this work does not take into account the dynamics over time. Therefore, to overcome this issue, a fourth direction for future research would be a longitudinal study, which would also make causal conclusions possible (Rindfleisch et al. 2008).

Given both the importance and the potential of RM in the PI we believe that exploring the areas indicated above will be of value to the companies using RM or intending to introduce it.