

University of Groningen

Not lean by default

Ziengs, Nick

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version

Publisher's PDF, also known as Version of record

Publication date:

2018

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Ziengs, N. (2018). *Not lean by default: Exploring practices, their design, and underlying mechanisms driving performance*. University of Groningen, SOM research school.

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

**Not lean by default:
Exploring practices, their design, and
underlying mechanisms driving
performance**

Nick Ziengs

Publisher: University of Groningen
Groningen, The Netherlands

Printer: Ipskamp Printing
Enschede, The Netherlands

ISBN: 978-94-034-0479-0 (print)
978-94-034-0478-3 (digital)

© 2018 Nick Ziengs

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system of any nature, or transmitted in any form or by any means, electronic, mechanical, now known or hereafter invented, including photocopying or recording, without prior written permission of the author.



rijksuniversiteit
 groningen

Not lean by default:

EXploring practices, their design, and underlying
 mechanisms driving performance

Proefschrift

ter verkrijging van de graad van doctor aan de
 Rijksuniversiteit Groningen
 op gezag van de
 rector magnificus prof. dr. E. Sterken
 en volgens besluit van het College voor Promoties.

De openbare verdediging zal plaatsvinden op
 donderdag 26 april 2018 om 12.45 uur

door

Nick Ziengs

Geboren op 17 december 1985
 te Coevorden

Promotores

Prof. dr. D. P. van Donk

Prof. dr. J. Riezebos

Beoordelingscommissie

Prof. dr. ir. C.T.B. Ahaus

Prof. dr. ir. J.C. Fransoo

Prof. dr. M. Stevenson

*Voor ieders
geduld.*

Contents

Chapter 1 Introduction	1
1.1 Lean manufacturing.....	1
1.2 Lean manufacturing practices.....	7
1.3 Lean manufacturing practices and their design	13
1.4 Outline	15
Chapter 2 The Distinctive Roles of Core and Infrastructural Quality Management Practices: A Meta-Analytical Structural Equation Modeling Study	25
2.1 Introduction	25
2.2 Background.....	29
2.3 Methodology.....	44
2.4 Results	53
2.5 Discussion.....	66
2.6 Conclusion.....	73
Chapter 3 The Placement of Effective Work-In-Progress Restrictions in Route-Specific Unit-Based Pull Production Systems: A Discrete-Event Simulation Study	75
3.1 Introduction	75
3.2 Background.....	78
3.3 Methodology.....	90
3.4 Results	96
3.5 Discussion and Conclusion.....	109

Chapter 4 Motivational Mechanisms in Work-In-Progress Restricted Production Systems: An Experimental Study	113
4.1 Introduction	113
4.2 Background.....	117
4.3 Methodology.....	131
4.4 Analysis	145
4.5 Results	150
4.6 Discussion.....	157
4.7 Conclusion.....	174
Chapter 5 Conclusion and Discussion	177
5.1 Introduction	177
5.2 Summary and main findings.....	178
5.3 Theoretical implications	184
5.4 Practical implications	191
5.5 Concluding remark	193
References	195
Summary	215
Nederlandse Samenvatting.....	223
Dankwoord.....	231
Appendix A	233
Appendix B	234

