



Online-Appendix zu

„Is the use of management accounting in startups a paradox? – A systematic literature review of how static management accounting practices can support dynamic startups“

Nico Boll

Karlsruhe Institute of Technology

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7. Appendices

Table 7

Examined Empirical Papers on Management Accounting in Startups

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Ahire & Golhar (1996)	Quality Management in Large vs Small Firms	JSBM	Firm characteristics	Accounting Based Control System	Entrepreneurial intensity	-
Black (2003)	Usefulness of financial statement components in valuation: an examination of start-up and growth firms	VC	-	Financial Statement and Reporting	Profitability	Firm characteristics
Borges and Hashimoto (2013)	To plan or not to plan? An analysis of the impact of planning on the disbanding or growth of Brazilian start-ups	IJESB	-	Business Planning	Survival of firm, Performance (Growth) Acquire financial resources	-
Bracker et al. (1988)	Planning and Financial Performance Among Small Firms in a Growth Industry	SMJ	-	Business Planning	Performance (Growth)	-
Brinckmann and Sung Min (2015)	Why We Plan: The Impact of Nascent Entrepreneurs' Cognitive Characteristics and Human Capital on Business Planning	SEJ	Entrepreneur's personal characteristics, Entrepreneur's professional characteristics	Business Planning	-	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Brinckmann et al. (2010)	Should entrepreneurs plan or just storm the castle?	JSBM	-	Business Planning	Performance (Growth), Survival of the firm	Firm characteristics, Quality, Contingencies
Cassar (2009)	Financial statement and projection preparation in start-up ventures	AR	Strategy, Outside network, Environmental Factors, Entrepreneur's professional characteristics	Financial Statement and Reporting	Strategic Orientation, Acquire financial resources, Non-financial measure, Performance (Growth)	Intensity
Cassar (2010)	Are individuals entering self-employment overly optimistic? an empirical test of plans and projections on nascent entrepreneur expectations	SMJ	-	Business Planning	Non-financial measure	-
Cassar and Gibson (2008)	Budgets, Internal Reports and Manager Forecast Accuracy	CAR	-	Budgeting, Financial Statement and Reporting	Non-financial measure	Contingencies
Cassar et al. (2015)	Alternative information sources and information asymmetry reduction: Evidence from small business debt	JAE	-	Costing method	Acquire financial resources	-
Cassia et al. (2005)	Management accounting systems and organisational structure	SBE	Firm characteristics	Accounting Based Control System	-	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Davila and Foster (2005)	Management Accounting Systems Adoption Decisions	AR	Presence of VC, Firm characteristics, Entrepreneur's Professional characteristics, outside network	Accounting Based Control System Budgeting	 Performance (Growth)	-
Davila and Foster (2007)	Management Control Systems in Early Stage Startup Companies	AR	Entrepreneur's Professional characteristics	Accounting Based Control System	Performance (Growth)	-
Davila et al. (2009)	Reasons for management control systems adoption: Insights from product development systems choice by early-stage entrepreneurial companies	AOS	Environmental factors, Strategy	Accounting Based Control System	-	-
Davila et al. (2015)	The Valuation of Management Control Systems in Start-Up Companies: International Field-Based Evidence	EAR	-	Accounting Based Control System	Profitability	Financial situation, Firm characteristics, Contingencies
Delmar and Shane (2003)	Does business planning facilitate the development of new ventures?	SMJ	-	Business Planning	Survival of firm, Entrepreneurial intensity	-
Delmar and Shane (2004)	Legitimizing first: organizing activities and the survival of new ventures	JBV	-	Business Planning	Survival of firm, Entrepreneurial intensity	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Gibson and Cassar (2005)	Longitudinal analysis of relationships between planning and performance in small firms	SBE	Prior performance	Business Planning	Performance (Growth)	-
Granlund and Taipaleenmäki (2005)	Management Control and controllership in new economy firms- A lifecycle perspective	MAR	Environmental factors, Firm characteristics	Accounting Based Control System	-	-
Gruber (2007)	Uncovering the value of planning in new venture creation: A process and contingency perspective	JBV	-	Strategic Use of Information, Business Planning	Subjective performance measure	Contingencies
Gumbus and Lussier (2006)	Entrepreneurs use a balanced scorecard to translate strategy into performance measures	JSBM	-	Strategic Management (Systems)	Performance (Growth), Subjective performance measure, Non-financial measure	-
Hayward et al. (2017)	Entrepreneurs' Capital Budgeting Orientations and Innovation Outputs: Evidence from Australian Biotechnology Firms	LRP	-	Financial Planning	Entrepreneurial intensity	-
Honig and Karlsson (2004)	Institutional forces and the written business plan	JM	Outside network Environmental factors, Entrepreneur's professional characteristics	Business Planning	Survival of firm, Subjective performance measure	-
Honig and Samuelsson (2012)	Planning and the Entrepreneur: A Longitudinal Examination of Nascent Entrepreneurs in Sweden	JSBM	-	Business Planning	Subjective performance measure	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Hopp and Sonderegger (2015)	Understanding the Dynamics of Nascent Entrepreneurship—Prestart-Up Experience, Intentions, and Entrepreneurial Success	JSBM	Entrepreneur's professional characteristics, Entrepreneur's personal characteristics	Business Planning	Survival of firm	Contingencies Intensity
Jänkälä and Silvola (2012)	Lagging Effects of the Use of Activity-Based Costing on the Financial Performance of Small Firms	JSBM	Prior performance	Costing method	Performance (Growth), Profitability	-
King et al. (2010)	Budgeting practices and performance in small healthcare businesses?	MAR	Firm characteristics, Strategy, Environmental factors	Budgeting	Subjective performance measure	Quality
Kirsch et al. (2009)	Form or substance: The role of business plans in venture capital decision making	SMJ	-	Business Planning	Acquire financial resources	Quality, MA activities, Entrepreneur's Characteristics
Lange et al. (2007)	Pre-start-up formal business plans and post-start-up performance: A study of 116 new ventures	VC	-	Business Planning	Performance (Growth)	-
Luypaert et al. (2016)	Financial statement filing lags: An empirical analysis among small firms	ISBJ	Strategy Outside network, Firm characteristics, Prior performance	Financial Statement and Reporting	-	Financial Situation

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Lybaert (1998)	The Information Use in a SME: Its Importance and Some Elements of Influence	SBE	Entrepreneur's personal characteristics, Firm characteristics	Strategic Use of Information	Subjective performance measure	-
Maes et al. (2005)	Modelling the Link Between Management Practices and Financial Performance. Evidence from Small Construction Companies	SBE	Entrepreneur's professional characteristics, Firm characteristics	Strategic Management (Systems); Costing Method, Business Planning, Strategic Use of Information, Budgeting, Accounting Based Control Systems	Survival of firm	-
Malagueño et al. (2017)	Balanced Scorecard in SME: effects on innovation and financial performance	SBE	-	Strategic Management (Systems)	Performance (Growth), Subjective performance measure, Entrepreneurial intensity	Firm characteristics
McMahon (1999)	Modelling the Extent of Financial Reporting Practices amongst Australian Manufacturing SMEs	SBE	Strategy, Entrepreneur's personal characteristics, Outside network	Financial Statement and Reporting	-	-
McMahon (2001)	Business growth and performance and the financial reporting practices of Australian manufacturing SMEs	JSBM	-	Financial Statement and Reporting	Performance (Growth)	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Mengel and Wouters (2015)	Financial planning and control in very small start-up companies: antecedents and effects on company performance	IJESB	Firm characteristics, Entrepreneur's professional characteristics	Financial Planning	Performance (Growth)	-
Moore and Yuen (2001)	Management Accounting System and organizational configuration: A life cycle perspective	AOS	Firm characteristics	Accounting Based Control System	-	-
Peel and Bridge (1998)	How planning and capital budgeting improve SME performance	LRP	Environmental Factors	Business Planning	Subjective performance Measure	-
Perry (2001)	The Relationship between Written Business Plans and the Failure of Small Businesses in the U.S.	JSBM	-	Business Planning	Survival of firm	-
Piest (1994)	Planning comprehensiveness and strategy in SMEs	SBE	Strategy	Business Planning	-	-
Rauch et al. (2000)	Cultural Differences in Planning/Success Relationships: A Comparison of Small Enterprises in Ireland, West Germany, and East Germany	JSBM	Firm characteristics	Business Planning	Performance (Growth), Subjective performance measure	Contingencies
Reid and Smith (2000)	The impact of contingencies on management accounting system development	MAR	Environmental Factors, Firm characteristics	Accounting Based Control System	-	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Risseeuw and Masurel (1994)	The role of planning in small firms: Empirical evidence from a service industry	SBE	Environmental Factors, Firm characteristics, Strategy	Business Planning	Performance (Growth)	-
Roper (1997)	Strategic initiatives and small business performance: An exploratory analysis of Irish companies	ERD	-	Accounting Based Control System	Performance (Growth), Profitability	-
Rue and Ibrahim (1998)	The Relationship between Planning Sophistication and Performance in Small Businesses	JSBM	-	Business Planning	Subjective performance measure	-
Sandino (2007)	Introducing the First Management Control Systems: Evidence from the Retail Sector	AR	Strategy	Accounting Based Control System	Performance (Growth)	Quality
Shane and Delmar (2004)	Planning for the market: Business planning before marketing and the continuation of organizing efforts	JBV	-	Business Planning	Survival of firm	-
Van Caneghem and Van Campenhout (2012)	Quantity and Quality of information and SME financial Structure	SBE	-	Financial Statement and Reporting	Acquire financial resources	Quality
Vander Bauwhede et al. (2015)	Financial reporting quality and the cost of debt of SMEs	SBE	-	Financial Statement and Reporting	Acquire financial resources	-

Author (Year)	Title	Journal	Antecedent Constructs	MA Constructs	Consequence Constructs	Moderators/ Mediators Constructs
Voss and Brettel (2014)	The Effectiveness of Management Control in Small Firms: Perspectives from Resource Dependence Theory	JSBM	-	Accounting Based Control System	Performance (Growth), Profitability	MA activities
Wassermann (2017)	The throne vs. the kingdom: Founder control and value creation in startups	SMJ	Entrepreneur's professional characteristics, Presence of venture capitalists	Accounting Based Control System	Profitability	Financial situation Firm characteristics
Wijbenga et al. (2007)	The Influence of the Venture Capitalist's Governance Activities on the Entrepreneurial Firm's Control Systems and Performance	ETP	Presence of venture capitalists	Accounting Based Control System, Strategic Management (Systems)	Performance (Growth)	Financial Situation
Wijewardena et al. (2004)	The Impact of Planning and Control Sophistication on Performance of Small and Medium-Sized Enterprises: Evidence from Sri Lanka	JSBM	-	Accounting Based Control System, Financial Planning	Performance (Growth)	-

Table 8

Second Level Categories for Moderators and Mediators

Moderators/Mediators	Definition/ Explanation
Intensity	The intensity construct measures the timing, duration and frequency of management accounting practices.
Contingencies	The contingencies describe the level of environmental circumstances and other influencing factors i.e. culture and industry competition.
Quality	This moderator assesses the level of sophisticated use of a management accounting practice.
Financial situation	This takes the financial backup of a company into account to assess and compare management accounting influences.
Characteristics	‘Characteristics’ describes the entrepreneur’s traits, personality, professional background as well as the firm’s characteristics.
MA Activities	This construct contains multiple other management accounting practices as moderating factors as well as the influence of the firm’s strategy or VC influence.

Table 9

Locating the moderators between the constructs

Location	Intensity	MA Activities	Quality	Financial Situation	Entrepreneur Characteristics	Firm Characteristics	Contingency Factors	Total
Between AC and MA	2	0	7	1	0	0	0	10
Between MA and CS	4	5	6	3	3	8	6	35
Total	6	5	13	4	3	8	6	45

Powerpoint presentation slides

IBU KIT, Chair of Management Accounting, Prof. Dr. Ir. Wouters

Bachelor's Thesis Presentation

Nico Boll
05 Feb 2018



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Table of Content

1. Introduction and Motivation
2. Methodology of the Review
3. Results
4. Discussion
5. Limitations and Contributions



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Topic



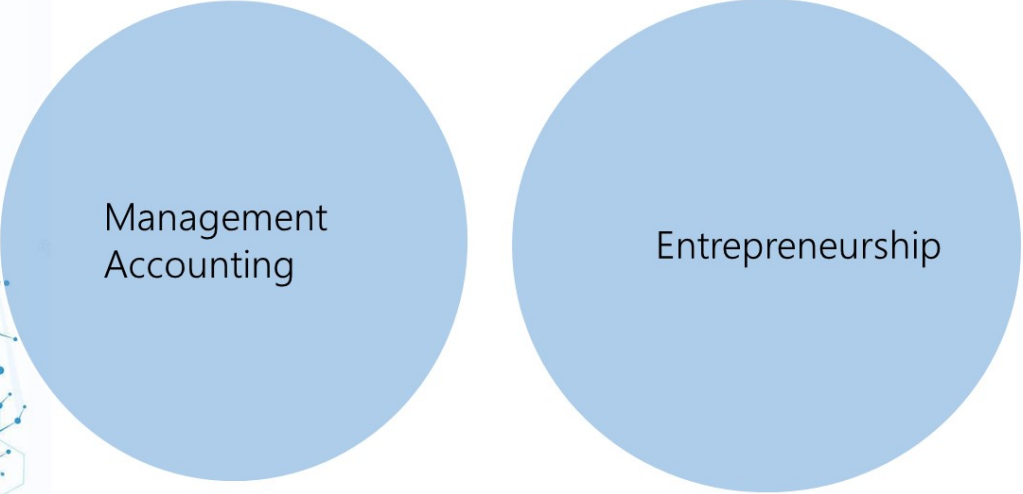

Is the Use of Management Accounting in Startups a Paradox?

- A Systematic Literature Review of how static Management Accounting Practices can support dynamic Startups

Supervisor: Dipl.-Wi.-Ing. M. Pelz

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Motivation – Current Understanding

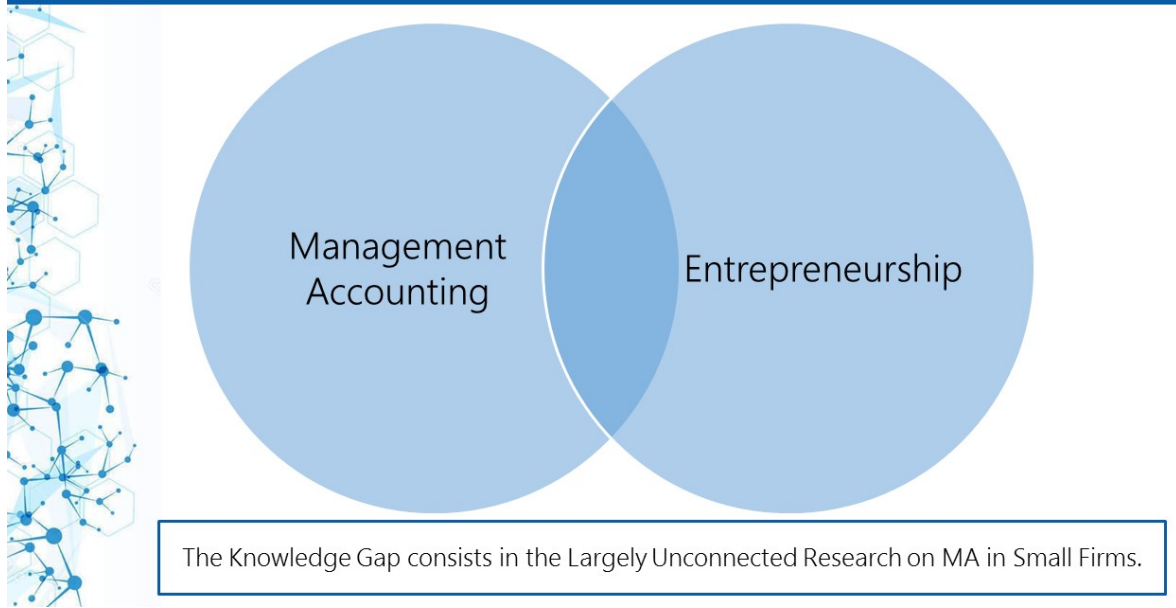


Management Accounting

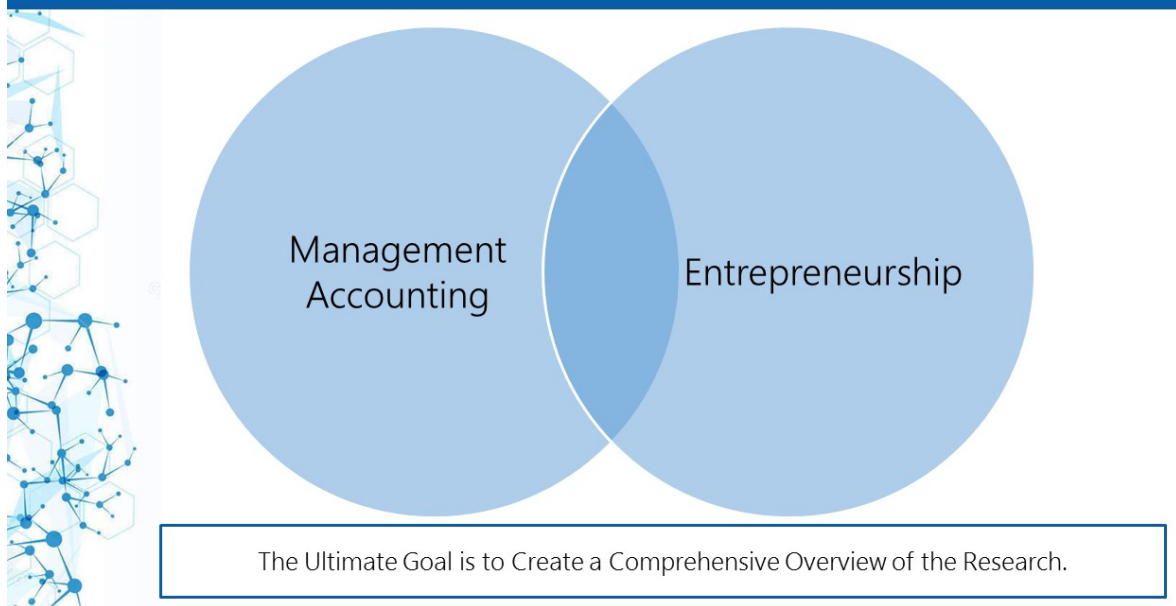
Entrepreneurship

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Motivation – Knowledge Gap



Motivation – Goal



Research Questions



1. What types of management accounting practices do startups adopt and use?
2. What are the antecedents of the adoption of these practices?
3. What are the consequences of the adoption?
4. What arguments do empirical papers offer for the adoption of management accounting in startups?

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Methodology



Systematic Literature Review

- Tranfield, Denyer & Smart, 2003
- Briner & Denyer, 2012

Planning the
Review

Conducting the
Review

Organizing the
Results

23 high Quality Entrepreneurial and Management Journals were selected for the Review.

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Methodology – Planning the Review



Selection of 24 keywords:

10 entrepreneurship terms:

((“entrepreneurship*” OR “entrepreneur*” OR “startup*” OR “start up*” OR “small firm?” OR “young firm?” OR “SME” OR “small enterprise*” OR “new technology-based firm*” OR “small business*”))

AND

14 management accounting terms:

((“management account*” OR “account*” OR “controlling” OR “budget*” OR “financial plan*” OR “planning” OR “cost*” OR “cost control” OR “control” OR “management control” OR “financial statement” OR “performance measure*” OR “management” OR “activity based”))

The Search was conducted with Scopus and yielded 2371 Papers.

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Methodology – Conducting the Review



Criteria of Consideration:

- Combination of one of the Terms of the two Groups
- Published Empirical Research testing Hypotheses
- Dealing with Small Firms

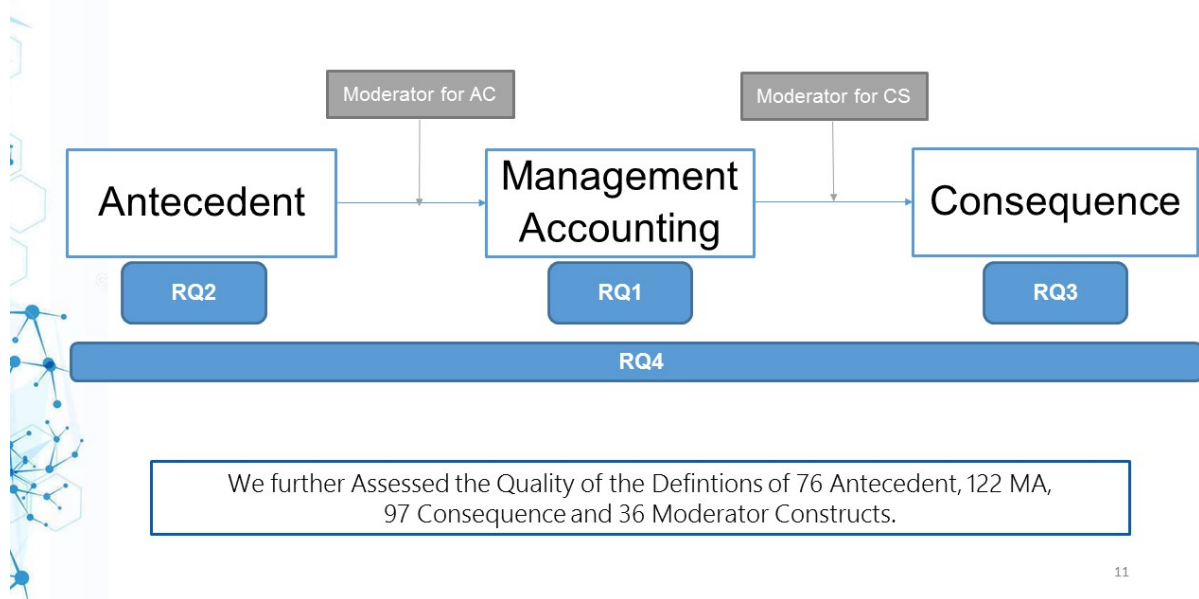
Exclusion:

- Dealing with different Topics (“*management*”)
- Not dealing with Small Firms (“*SME*”)
- Not dealing with Management Accounting (“*Entrepreneur**”)

53 Papers from 18 different Journals were selected for further Analysis.

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Methodology – Organizing the Results 1st Level Coding



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Methodology – Organizing the Results

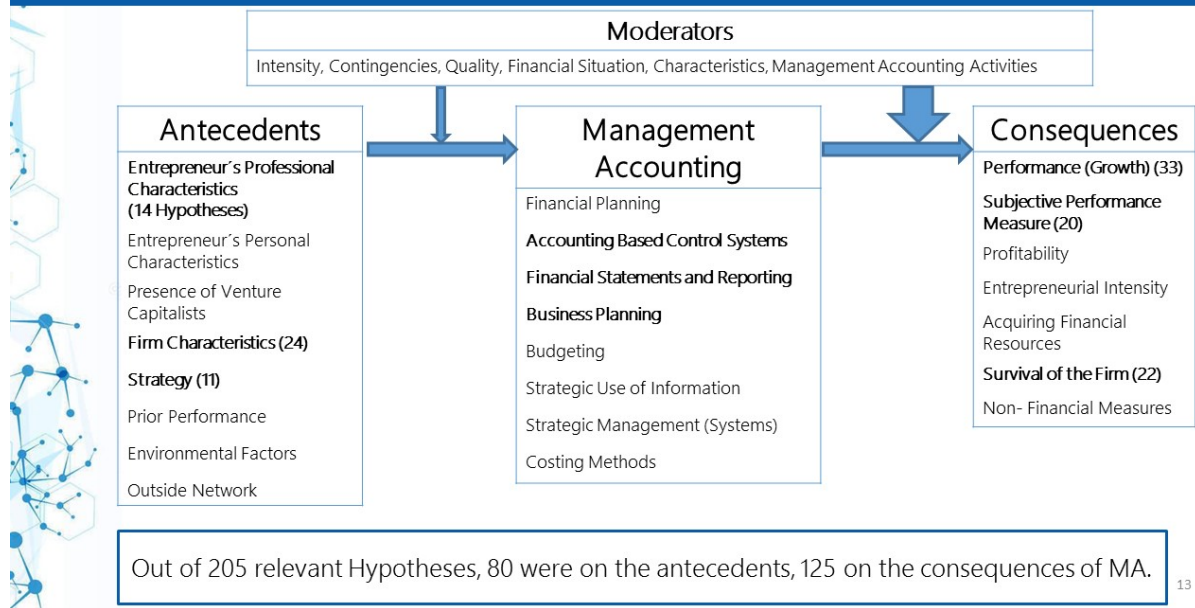
Analysis of 53 Papers with 2nd Level Coding:

1. Group construct with same or similar Meaning
2. Define Superordinate Categories
3. Assign each Construct to one of the Groups

We conducted a 2nd Level Coding to ensure the Clarity of the Review

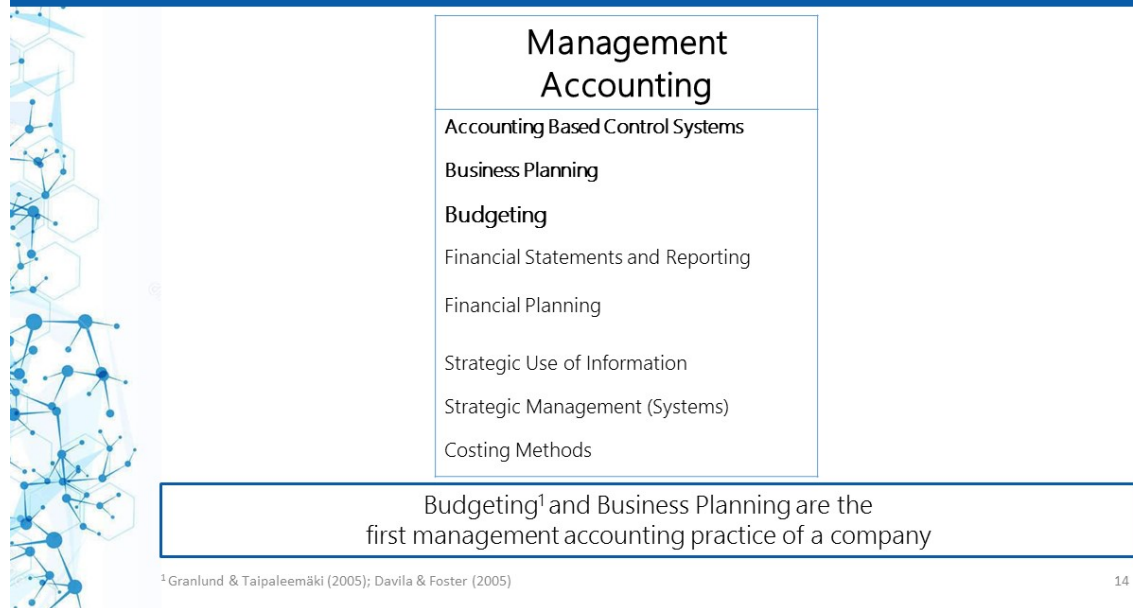
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Methodology – Organizing the Results 2nd Level Coding



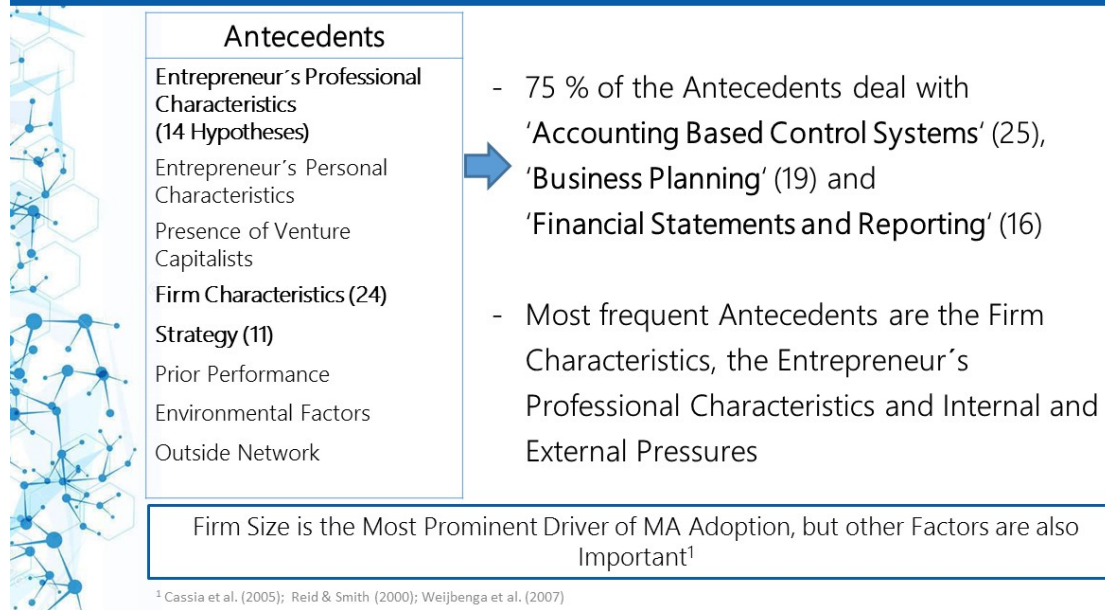
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Results – RQ1



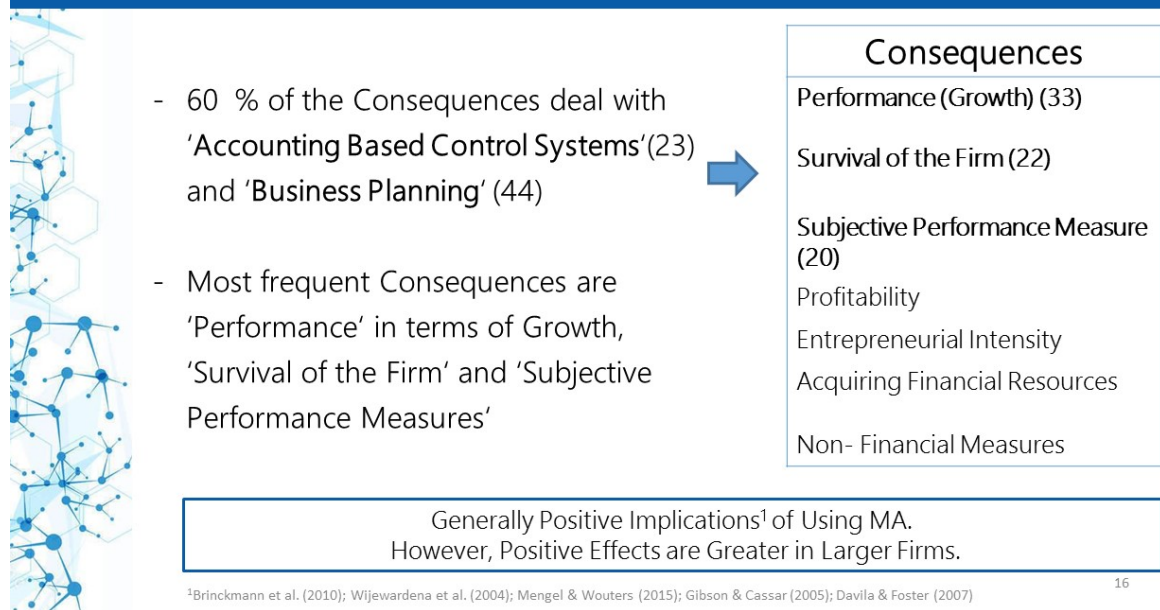
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Results – RQ2, RQ4



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Results – RQ3, RQ4



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Discussion – Findings and RQ 4

- MA helps the Startup to manage scarce Resources, manage Growth and deal with organizational Uncertainty
- Business Plans: mixed Results but Positive Implications prevail
- Implementation costly and the Use requires Skills
- Human and Financial Resources are Prerequisite¹
- MA does Not constrain Innovation but offers Infrastructure²
- Remaining Issue: Trade Off and Perfect Timing of Adoption

¹ Mengel & Wouters (2015); Jänkälä & Silvola (2012)
² Malagueño et al. (2017); Delmar & Shane (2003)

Discussion – Limitations

Findings:


- Definition of Constructs
- Heterogenous Samples
- Multiple Measures for Performance

} Comparability ⚡

Methodology

- Consideration of only high Quality Journals → no “grey literature”
- Overwhelming amount of irrelevant Papers

Summary and Contribution

- 
- ✓ Analysis of 53 Empirical Papers on Management Accounting in Startups in the most influential Journals
 - ✓ Antecedents and Consequences of Management Accounting
 - Contradict that MA in Startups is a Paradox
 - Help to Assess the Decision of Implementing MA
 - Contribute to Entrepreneurial and Management Research
 - Pave the Way for Future Research

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Thank You!

I will be Happy to Answer Your Questions Now


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Backup Methodology – Planning the Review

Selection of 23 high Quality Entrepreneurship and Management Journals based on:

- Dos Santos et al. (2011)
 - Hesford et al. (2006)
 - VHB Journals Rating (2015)
 - The Financial Times Journals Rating (2016)
- Administrative Science Quarterly
 - Accounting Review
 - Accounting, Organizations and Society
 - Contemporary Accounting Research
 - Entrepreneurship and Regional Development
 - Entrepreneurship, Theory and Practice
 - European Accounting Review
 - International Entrepreneurship and Management Journal
 - International Journal of Entrepreneurship
 - International Journal of Entrepreneurship and Small Business
 - International Small Business Journal
 - Journal of Accounting and Economics
 - Journal of Accounting Research
 - Journal of Business Venturing
 - Journal of Management
 - Journal of Small Business Management
 - Long Range Planning
 - Management Accounting Research
 - Research Policy
 - Small Business Economics
 - Strategic Entrepreneurship Journal
 - Strategic Management Journal
 - Venture Capital

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Methodology – Conducting the Review

Journal Title	Number of Selected Papers
Journal of Small Business Management	12
Small Business Economics	10
Strategic Management Journal	5
The Accounting Review	4
Journal of Business Venturing	3
Management Accounting Research	3
Long Range Planning	2
Accounting, Organizations and Society	2
International Journal of Entrepreneurship and Small Business	2
Venture Capital	2
Contemporary Accounting Research	1
Entrepreneurship and Regional Development	1
Entrepreneurship, Theory and Practice	1
European Accounting Review	1
International Small Business Journal	1
Journal of Management	1
Strategic Entrepreneurship Journal	1
Journal of Accounting and Economics	1
Total	53

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Backup—Exclusion Criteria

The Reasons for Exclusion of Papers

- First Scan of Title and Abstract: 89.12% excluded due to lack of relevance at first sight
- “management” yielded: **risk** management, **strategic** management, management **competencies** (i.e. Britzelmaier et al. 2015; Yamakawa & Gordon, 2016)
- “SME” yielded papers dealing with **large** firms
- “Entrepreneur” yielded papers dealing with the **motivation, incentives** and the **creation of startups and/or direct effects on performance**. (i.e. Jayawarna et al., 2013; Kickul et al., 2009; Miao, Qian, and Ma, 2017) or dealing with **gender roles** and **gender differences** in entrepreneurship (i.e. Hechavarría, et al., 2017) or entrepreneurial **education** or **orientation** (i.e. Block, Hoogerheide, and Thurik, 2013)
- Exclusion of **succession planning** (i.e. Motwani, Levenburg, Schwarz, and Blankson, 2006) and **bootstrapping** (i.e. Ebben and Johnson, 2006)
- Second Scan of Content and Methods:
- Exclusion of **theoretical** papers or **reviews** (i.e. Cooper, 2015; Parry, 2016)
- Exclusion of **duplicates** (i.e. A. Davila, Foster, & Jia, 2015)

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Backup—Microsoft Excel for Construct Analysis

1	Author	Hypotheses	Test result	Antecedent	MA construct	Cosequence	Moderator
18	Malagueno et al.						
19		H1a: The use of BSC by SMEs is positively associated with financial performance	support		BSC	Financial Performance	
20		H1b: The use of BSC by SMEs is positively associated with exploitative innovation	not support		BSC	Exploitative Innovation	
21		H1c: The use of BSC by SMEs is negatively associated with exploratory innovation	support		BSC	Exploratory Innovation	
22		H2a: The positive effect of BSC on financial performance depends on the firm's stage of development, such that the effect is stronger in more established firms	support		BSC	Financial Performance	Stage of Development
23		H2b: The positive effect of BSC on exploitative innovation depends on the firm's stage of development, such that the effect is stronger in more established firms	not support		BSC	Exploitative Innovation	Stage of Development
24		H2c: The negative effect of the BSC on exploratory innovation depends on the firm's stage of development, such that the effect is weaker in more established firms	not support		BSC	Exploratory Innovation	Stage of Development

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