

Introduction

- Healthcare expenditure keeps increasing on an annual basis.
- The government aims to limit this with regulated competition.
- UMCs have adopted a cost focused approach.
- Sustainable development has emerged within healthcare, Green Teams and bottom up initiatives have been set up.
- But the transition towards sustainable healthcare is slow.
- Actors in the market do not contribute due to several barriers.
- Sustainable healthcare has become an institutional void.

Theoretical Framework

- Barriers of institutional voids can be overcome by collective action, so UMCs need to manage their stakeholders effectively.
- Stakeholder theory defines definitive stakeholders for UMCs: the government, suppliers, and insurers.
- Adopting stakeholder management within an UMC's business model, aids managers to collaborate with these stakeholders on sustainable healthcare.

Methods

- Stakeholder categorization
- 14 interviews with stakeholders
- Case study on the LUMC
- 2 focus group interviews at the LUMC

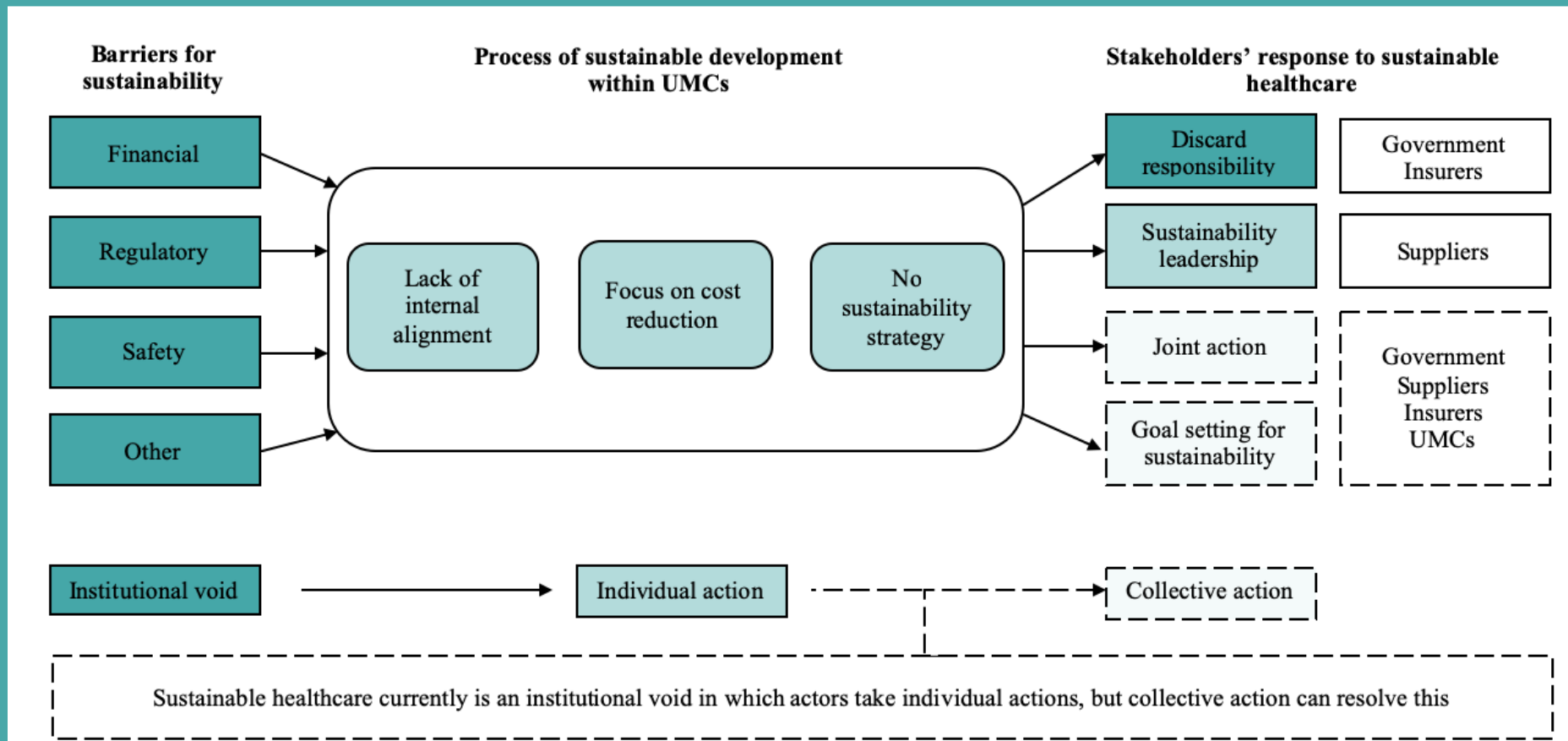
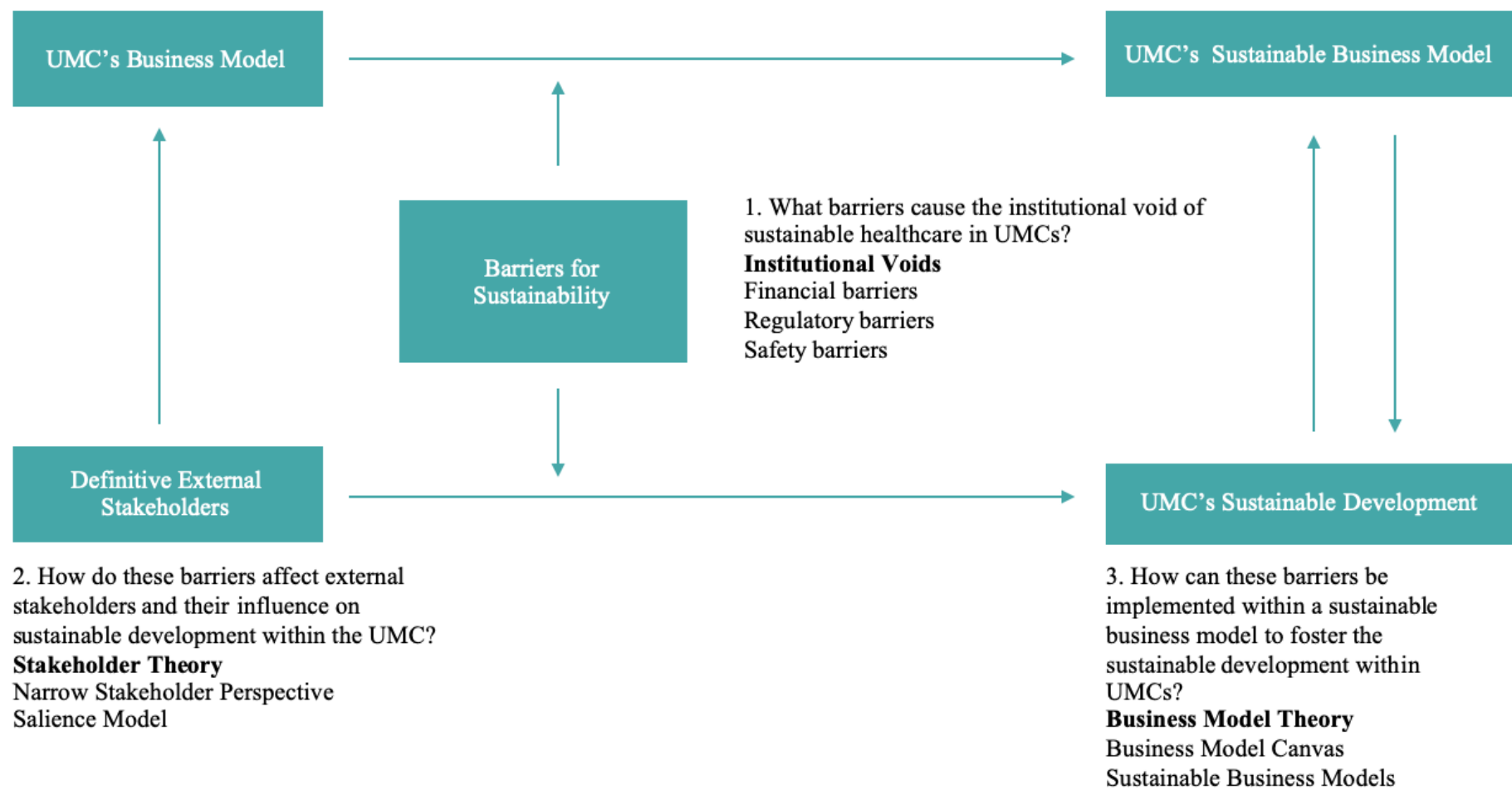
Results

- 4 types of barriers have been identified in sustainable healthcare.
- UMCs focus on cost reduction, but lack an internal strategy on sustainability and alignment to achieve this.
- External stakeholders then discard their responsibility for sustainability. Only suppliers want to take the lead.
- Accounting for these responses in a business model aids UMCs to manage their relations for sustainable healthcare.

Conclusion

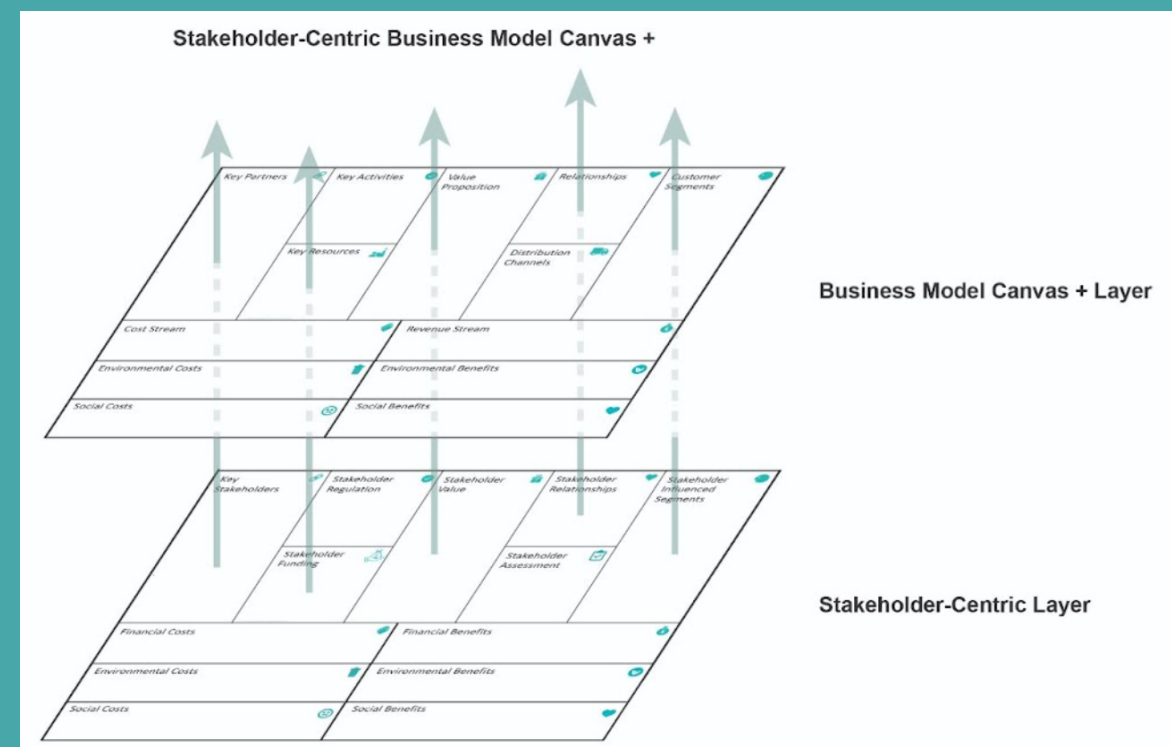
- To overcome the institutional void, actors need to move from individual action towards collective action for sustainability.
- The stakeholder-centric business model canvas + is a facilitating tool to instigate collaboration.

RQ: How can stakeholder centric business models overcome institutional voids in the development of sustainable healthcare in UMCs?



Case Study: LUMC

- The LUMC states that by 2030 it wants to be climate neutral and increase circularity. Several steps have been taken to achieve this, related both to core activities as well as to other sideline activities, and sustainability milestones are celebrated by the hospital.
- However, after conducting the Better Business Scan to analyze the hospital's sustainability attitude, the LUMC's motivation for sustainability is characterized as 'stuck in the middle'. Some steps have been taken towards sustainable healthcare, but this does not imply that the entire organization has the same sustainability intention and can therefore lead to organizational paralysis with regards to sustainability.
- The current barriers for the LUMC are a lack of internal alignment, lack of communication and coordination on sustainability, habitual constraints, conservative attitudes, and a cost focused approach.
- To adapt an active intention and realization attitude toward sustainability, the LUMC should adopt a long-term sustainability strategy and broaden its value proposition. The challenge, and opportunity, for the LUMC therefore is to reconcile its 2030 sustainability goals with its short term cost efficiency goals. This can be achieved by adopting a sustainable business model and by working together with definitive external stakeholders for sustainable healthcare.



Stakeholder-Centric Layer Business Model Canvas + LUMC

Business Ecosystem Layer Business Model Canvas + LUMC

Key stakeholders Ministry of VWS • Driven by the general public • Green Deal 2.0 Medical suppliers • Equipment and tools • No pharmaceuticals Non Medical • Food, beverages, energy, construction Insurers • Continuity of care Ministry of OCW • Funding of research on sustainability • Implement sustainability in education Regional stakeholders • Gemeente Leiden • Citizens of Leiden	Stakeholder regulation Ministry of VWS • European regulation • No sustainable regulation Suppliers • MDR • Insurers • HIA Stakeholder funding Ministry of VWS • No budget for sustainability • Insurers • No financial incentive for sustainability Ministry of OCW • Budget for sustainability	Stakeholder value Ministry of VWS • Affordable care of high quality • Sustainability is not a priority Medical suppliers • Frontrunner position Non medical suppliers • Support sustainable transition from experience in other sectors • Insurers • Provide high quality and affordable care and aim at prevention Ministry of OCW • Implement sustainability in education and research programs	Stakeholder relationships Ministries of VWS and OCW • Facilitating relation Suppliers • Contractual relation Insurers • Contractual obligation Stakeholder assessment Ministry of VWS • No assessment Suppliers • Supplier sustainability reporting	Stakeholder influenced segments Ministry of VWS • Increased urgency for sustainability by citizens • European legislation Ministry of OCW • Leiden University Suppliers • Hospital staff and their habits Insurers • National legislation • European regulation • (Future) Clientele • Patient boards	Key partners Patientcare • Insurers • Ministry of VWS • Banks Education • Universiteit Leiden • OOR Leiden • Ministry of OCW Research • Ministry of OCW • Erasmus MC, TU Delft, Leiden Bio Science Park • Equipment suppliers • Private funds	Key activities Patientcare • Medical innovation • Regenerative medicine • Population health Education • University, Medical Research • Graduate School Key resources Physical • Buildings, supplies and equipment Intellectual • Leiden University Human • Staff key activities Financial • Subsidies and DBCs	Value proposition Patientcare • Value and Data Driven Healthcare Education • Research Intensive • Blended Learning • Interdisciplinary • International • Honours College Research • Open Science • From-bench-to-bedside-Principle "As an innovator, the LUMC stands for improving healthcare and people's health"	Relationships Patientboard • KPIs and patient satisfaction Student Council • Board agreements • Collabs universities Research • Citation score • Prizes & recognition Channels Patientcare • Insurers Education • Universities Research • Journals, congresses, and conferences	Segments Patients • Top clinical care • Top referral care • 40 Expertise centres rare diseases • Regular care • Acute care Students • Decentral selection PhD Candidates and Researchers								
Financial costs Ministry of VWS Medical suppliers Non medical suppliers Insurers	No budget due to unclarity Certification costs Locked in contract	Financial benefits Ministry of VWS Medical suppliers Non medical suppliers Insurers	Subsidies - - DBC-products	Cost structure Personnel costs • Patientcare, education and research Operating expenses • Patientcare, education and research Depreciation and interest	Revenue stream Patientcare • DBC-products and subsidies VWS Education • Subsidies OCW Research • Subsidies from ZonMw, NWO, Nationaal Onderzoeksprogramma Other operating income	Environmental costs Ministries of VWS and OCW Medical suppliers Non medical suppliers Insurers	- Disposables and CO2 emissions Waste and CO2 emissions -	Environmental Benefits Ministries of VWS and OCW Medical suppliers Non medical suppliers Insurers	Green Deal 2.0 Reusables Knowledge from other sustainable sectors -	Environmental costs • CO2 emissions • Medical and non medical waste	Environmental Benefits • Green Teams, Groen & Gezond • Green Deal 2.0, Zilveren Milieuthermometer	Social Costs Ministries of VWS and OCW Medical suppliers Non medical suppliers Insurers	Staff shortage and effects of corona Changing staff habits - Health risks for future clientele	Social Benefits Ministries of VWS and OCW Medical suppliers Non medical suppliers Insurers	Content general public - - Affordability and prevention of healthcare	Social Costs • CO2 effects on public health • Rising healthcare expenditure	Social Benefits • Patient wellbeing • Education and Research