

# UNIVERSITY CAMPUS SUSTAINABILITY MANAGEMENT: SEEKING A BREAKTHROUGH IN GERMANY

Jaroslav Pařmik

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## Abstract

Higher education institutions should contribute to sustainability transformation of society not only by preparing young generation for new challenges, but also by applying sustainability principles into campus operations. But few universities really do. This paper looks at an example of Leuphana University Lüneburg, which is considered to be a leader in sustainability in Germany. It became a climate neutral in 2014 and introduced other measures to increase sustainability. The author chooses a qualitative case study research design and explores several research questions: Why is sustainability considered in such intensity? What path dependencies influenced sustainable development? What are the obstacles to the more sustainable university campus? The data were gathered by interviewing main actors, by studying documents, participant observation, and analyzed using standard content analysis method. Path dependence concept was used as the theoretical underpinning. The case study shows, sustainable development evolves not in a linear way; the breakthroughs are achieved by negotiations with various internal and external stakeholders, by the pragmatic attitude of a part of the management team and academics, by embracing various windows of opportunities, including exogenous shocks. Development is strongly influenced by path dependencies and historical contingencies. But the university also creates its own new sustainable path.

**Key words:** Sustainability management, university campus, climate neutral university

**JEL Code:** L, M, Q

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## 1 Introduction

From its roots in 70th and 80th of the twentieth century, the discourse of sustainable development and sustainability was constructed mostly in a normative way, as it can be seen in founding documents such as Our common future (Brundtland et al. 1987), more recently in

United Nations Global Compact<sup>1</sup> or Sustainable Development Goals<sup>2</sup> and in scientific reflection (Rahdari & Rostamy 2015; Schmiege et al. 2017).

Normative expectations were formulated for all levels of society, also focusing on a micro level of individual organizations. There is a notion that higher education institutions (HIEs) such as universities should lead the sustainability transformation of society. Some authors even talk about sustainability imperative for higher education (Cortese 1992; Krizek et al. 2012). It should be done not only by preparing young generation for future challenges through education but also by applying sustainability principles into operations of university campuses, so universities “walk the talk”.

Progress in the area of sustainability of HEIs was early indicated as slow and full of barriers (Dahle & Neumayer, 2001; Dawe et al. 2005; Lozano 2006) and is still regarded as such (Lozano et al. 2013; Sonetti 2017). It was also envisioned as a very problematic development, as noted by Corcoran and Wals (2004, p. 87): „In a postmodern world, pathways towards sustainable universities are unlikely to develop without friction, controversy, and conflict.“

But there are few HEIs in the world, which stepped up their efforts and delivered a particular breakthrough in sustainable development despite looming conflicts and frictions. One of them is Leuphana University Lüneburg in Germany, which is considered to be a leader in sustainability education and practice in Germany. This university set itself for an ambitious goal of becoming a climate neutral institution, using 100% renewable sources, and contributing in that way to sustainable development. The author looks specifically to the sustainability management of the university campus of the Leuphana, where more sustainability-oriented measures were implemented with more or less success.

## **2 Path dependence and path creation**

The theoretical concept of path dependence is well established in management journals. It is also suitable for the topic of university campus sustainable development, its sustainability

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<sup>1</sup> UN Global Compact. (n.d.). Retrieved April 30, 2018, from <https://www.unglobalcompact.org/>

<sup>2</sup> Sustainable development goals. (n.d.). Retrieved April 30, 2018, from <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

management and research questions, which are focused on obstacles to change to a more sustainable university.

Path dependence is defined by Vergne & Durand (2010, p. 741), as a “property of a stochastic process which obtains under two conditions (contingency and self-reinforcement) and causes lock-in in the absence of exogenous shock.” This phenomenon can create surprising long-term inefficiencies and can contribute to the unsustainability of products, services, to unsustainability of markets, states, and institutions. This paper focuses specifically on path dependencies, which create unsustainability in university campus operations.

We can categorize the concept into three levels. Path dependence can occur on an institutional or macro level, on a level of governance and technology or meso level, and on the micro level of organizational resources and capabilities (Vergne & Durand, 2010). For the analytical purposes of this paper, the author uses the path dependence framework developed by Liebowitz and Margolis (1995), which categorize path dependence into three degrees as shown in the Tab. 1. The following analysis will look to the second-degree path dependence and the third-degree path dependence.

**Tab. 1: Three degrees of path dependence**

First-degree path dependence	Second-degree path dependence	Third-degree path dependence
Persistence of prior conditions or decisions exists, but with no implied inefficiency and unsustainability.	Persistence of prior conditions or decisions leads to outcomes that are regrettable and costly to change.	Persistence leads to an outcome that is inefficient and unsustainable, but in this case, the outcome is ‘remediable’.

Source: Liebowitz & Margolis (1995), edited by the author

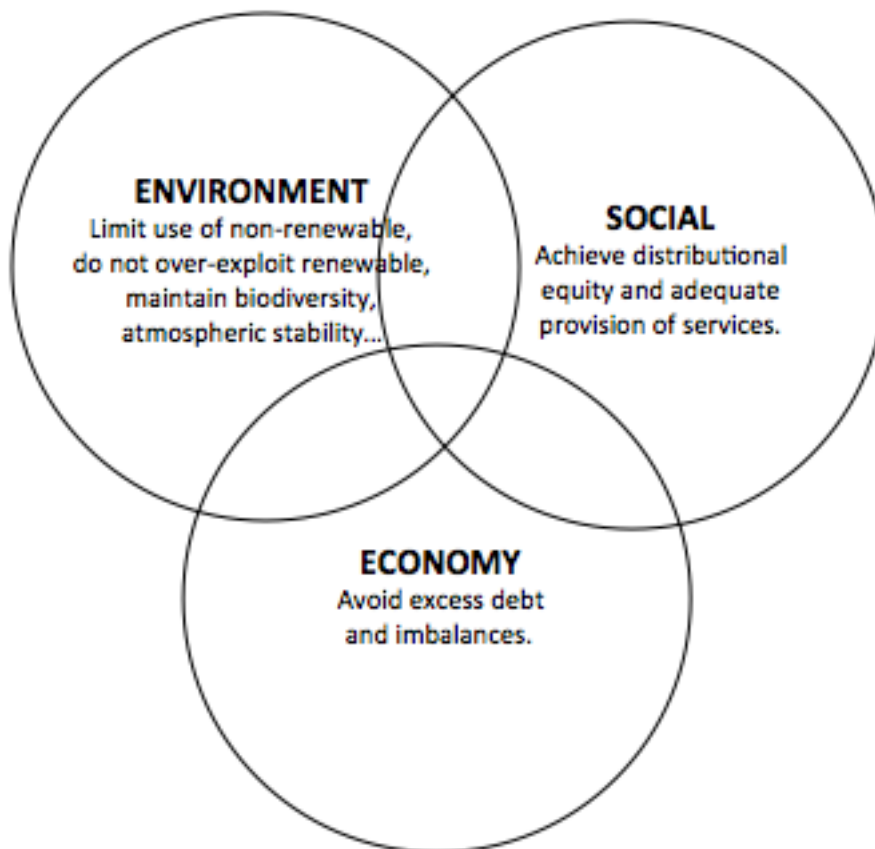
Path dependence is often related to path creation and according to literature, those perspectives cannot be separated (Garud & Karnoe 2013). Mechanism of building certain path is however different than accumulating a path dependency. The newly produced path takes a long time to establish, it is very fragile. But it can also convert itself later into a path dependency and become a root of increased sustainability.

### **3 Normativity and sustainability management**

The concept of sustainability has a normative character, which states societal expectations in economic, environmental and social fields. The expectations were formulated explicitly in the

late 1980s and built into the document known as Our common future (Brundtland et al. 1987). It is expected, that in the economic field global society will avoid excess debt and imbalances, in the environmental field, use of non-renewable resources will be limited, over-exploitation of renewable resources and systems will be avoided and biodiversity, atmospheric stability and other ecosystem functions will be maintained. In the social field, society should achieve distributional equity, adequate provision of social services such as health, education, participation and gender equity. Those normative views replicate itself during the time and transform into global goals, such as Sustainable Development Goals. They also enter strategic documents of organizations including universities. A Venn diagram most often visually represents these normative requirements, as it is demonstrated in the Fig. 1.

**Fig. 1: Normative requirements of sustainable development concept**



Source: author, based on Brundtland et al. (1987) and Holmberg (1992).

Management of organizations must react to those new normative requirements, which are formulated on the political level and often translated into legislation and regulations. With the rise of normative requirements, whole new field of management practice and science is created. It is called “sustainability management”. According to Schaltegger et al. (2002, p.1),

“sustainability management can be described in both functional and institutional terms. From a functional point of view it is designed to steer the ecological, social and economic impacts of business activities in such a way that an enterprise develops in the direction of sustainability. The aim is not only to ensure systematic management of social and ecological aspects using economic methods, but also to integrate them in the conventional business management process. From an institutional point of view, corporate sustainability management describes the group of actors and organizational structure within the business enterprise that is concerned with social and ecological aspects and their integration in the conventional process of operational.”

Thus, the field of management undergoes certain shift or turn and is put in front of the new set of goals. But as we will see, organizations change slowly and stay immersed in path dependencies. Sustainability managers and leaders of organizations, which see these new normative requirements as their new mission, create new visions and new paths to achieve sustainability transformation.

#### **4 Research design and method**

The author chooses the research design of a qualitative case study and explores several research questions related to the sustainability breakthrough at the Leuphana University Lüneburg: Why is sustainability considered in such intensity here? What path dependencies influenced sustainable development? What were and are the obstacles to more sustainable university campus?

The data were gathered by interviewing the main actors of the sustainability transformation from different organizational levels and functions. Interviews with university top management were included, as well as interviews with professors, other academics, students and administration staff (2 top managers, 2 students, 4 professors and 2 administrative workers). Triangulation of data was achieved by inclusion of participant observation by the author, who spent four months at the Leuphana University Lüneburg, and also by the inclusion of documents such as sustainability reports of the university, official university newspaper and online communication.

The gathered data were analysed using standard content analysis method with help of professional software for qualitative analysis. The outcome of the analysis was compared with

theory and concepts acquired by a literature review. Path dependency concept was predominantly used for the theoretical underpinning.

## 5 Findings

From the data, it is evident, those relatively distant events from the past influenced the creation of firstly environmental, and later sustainability agenda at the Leuphana University Lüneburg. Founders of the sustainability transformation of the university were active in the field of environmental debate in Germany in 1970s, which was centred round atomic energy issue and issue of state power and democracy. Later, they become academics and professors and established the research field of environmental management in the 1990s at the university, and at the beginning of 2000s, enlarged team turned this approach into sustainability management agenda. The group started in the 1990s in a number of just few professors and snowballed into seven at the beginning of 2000s. But those people had a strong vision for sustainability and internalized the normative stance of sustainable development. As some of them put it, to pursue sustainability vision was more possible in university than in a company at that time in Germany. There was not enough interest from companies.

But there were path dependencies, which blocked faster involvement of more scientists into sustainability management of the campus. As one actor put it in the interview: “To make our campus greener and introduce more sustainability, it was not interesting in that time. It was too easy. I did not find it interesting from the research point of view.” This notion, that sustainability not very “scientific” shows predominant position of science, which values more theoretical advancement, creation of a hypothesis and its validation. Of course, it is important. But according to sustainability leaders at the Leuphana University, it is not enough to overcome pressing sustainability challenges.

To overcome this path dependency, where basic research is viewed and executed as distant from practice and practical impact, actors of sustainability transition at the university implemented change in pedagogical and research attitudes. Project-based and activity based learning was introduced as well as new transdisciplinary research methods. Those methods were first introduced by a small number of professors and adopted by relatively a small number of students. The more massive change towards sustainable university was catalysed by an exogenous shock.

The university faced big problems in the beginnings of 2000s. According to the actors, it did not have interesting and distinguished profile among other German and even local universities. It was not particularly popular among students and state of Lower Saxony seriously contemplated closure of the university. As another actor put it: “We had to do something new and had to make this move forward. Otherwise, we would not succeed and perhaps be closed.” To survive, the university had to radically change its governance (it became public foundation), merge with another higher education institution, and hire new management. A small but dedicated group of sustainability scientists used this exogenous shock as a leverage point to increase its influence and impact and to break path dependence. Sustainability was chosen as one of the strategic priorities for the university. It influenced also the creation of more sustainable campus, especially the installation of photovoltaic panels and following carbon neutrality.

But not all path dependencies were overcome on the campus level. In the field of transportation, an ambitious plan for the car-free university was developed, but administrative employees blocked it. Car culture in Germany is strong. There was a plan for more local and seasonal food offer in organic standard in the university cafeteria. That goal was fulfilled just partly. According to actors, the reason was path dependence in supply chain management of food by university service providers. The similar situation is also with the waste separation at the university campus, which was not fully implemented.

## **6 Conclusion**

Sustainable development of the university campus is strongly influenced by path dependencies and historical contingencies. They occur in all levels: On an institutional level, on a level of governance and technology or meso level, and on the micro level of organizational resources and capabilities. The case study shows, that sustainable development evolves not in a linear way; the breakthroughs are achieved by negotiations with various internal and external stakeholders, by a pragmatic attitude of a part of the management team and academics, by embracing various windows of opportunities, which include exogenous shocks. We can observe some second-degree path dependence, where persistence of prior conditions and decisions leads to outcomes that are costly to change. That is especially true in segments of transportation and food. Third-degree path dependence is present in the field of waste management, where the change does not appear to be costly.

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**Contact**

Jaroslav Pašmik

Faculty of Business Administration

Department of Management

University of Economics, Prague

jaroslav.pasmik@vse.cz