

## Tbilisi 2022 Abstract Submission

### Title

Drivers of sustainable innovation in Hungarian wine industry

### I want to submit an abstract for:

Conference Presentation

### Corresponding Author

Lekics Valéria

### E-Mail Corresponding Author

[lekics.valeria.etelka@phd.uni-mate.hu](mailto:lekics.valeria.etelka@phd.uni-mate.hu)

### Affiliation

PhD-student at Hungarian University of Agriculture and Life Sciences - Doctoral School in Management and Organizational Sciences

### Co-Author/s

Name	Affiliation
Prof. Dr. Imre Fertő	Hungarian University of Agriculture and Life Sciences - Head of Doctoral School in Management and Organizational Sciences

### E-Mail/s Co-Author/s

E-Mail
ferto.imre@uni-mate.hu

### Keywords

Eco-innovation, green innovations, capabilities, knowledge transfer, wine industry, Hungary

### Research Question

1) To what extent do wine firms adopt and develop eco-innovations and conventional innovations? (2) Are there differences between drivers associated with eco-innovations and conventional innovations?

### Methods

Data collection: firm-level survey on business and innovation strategies in the Hungarian wine industry  
Analysis: estimating semi-nonparametric binary choice models for the dependent variables

### Results

Our results suggest that both conventional and eco-innovation are associated with internal factors and we find that the drivers of innovation differs by innovation types.

### Abstract

Drivers of sustainable innovation in Hungarian wine industry

The future of the wine industry in a context of changing environmental conditions has received increasing attention

from the different research disciplines. Growing concerns on the uncertain future and the widespread adoption of new regulations regarding the industry's environmental footprint have prompted wineries to develop and adopt new environmental practices and technologies especially in developed countries. The opportunities and challenges associated with these transformative forces have concomitantly become an important subject of inquiry. The range of questions and methods to address this emerging topic, as well as the geographical scope of the cases analyzed, have expanded in recent years. However, the knowledge of how wine firms adopt and develop new sustainable practices and eco-innovations is still limited. In addition, new insights about eco-innovation have yet to be extended across a wider variety of geographical and institutional contexts. Although there is increasing literature on eco-innovation in wine sector in developed countries, the research on Central European countries is still scarce. Our research tries to fill this gap focusing on Hungary with rich tradition in wine making. More specifically, we address two questions. 1) To what extent do wine firms adopt and develop eco-innovations and conventional innovations? (2) Are there differences between drivers associated with eco-innovations and conventional innovations?

Hungary is a good example to investigate the innovation in wine sector. Since the fall of Communism winemakers are recovering traditional recipes and are experimenting with new techniques that existed before collectivization. The Hungarian Wine Society describes the sector as characterized by "a time of innovation, rivalries and rediscovery - attempts to define the Hungarian version of "international" grape varieties, and to recreate and rehabilitate their indigenous grapes". Vineyards are experimenting with new blends, new grape varieties in unfamiliar regions, and rediscovering lost varieties. A small number of large wine farms have received interest from Foreign Direct Investment, but the majority of the sector is still constituted by domestically owned, micro and small businesses. To illustrate, before transition about 30 large state societies and 50 cooperatives controlled the Hungarian wine production.

Recent literature, to which we relate more directly in our paper, addresses eco-innovation's distinctiveness in terms of underlying processes, drivers, and capabilities within the organization. A wide range of factors and determinants associated with conventional forms of innovation have been identified over the years. They range from internal capacities and resources to extra-organizational interactions and knowledge networks. It remains unclear whether the same determinants are associated with eco-innovation.

We focus on the three potential factors affecting the adoption of sustainable innovation. First factor relates to firm characteristics. Papers on innovation have long investigated the relationship between innovation and the general characteristics of the firm including firm size and age yielding inconclusive results.

Second factor relates to internal capabilities. Resource-based theories have emphasized the role that strategic capabilities and resources play in terms of innovation and competitiveness. The ability of firms to integrate, develop and recombine proprietary and complementary resources provides the foundation for dynamic capabilities and sustained competitive advantage. The development of these capabilities results in part from previous investments in knowledge creation, repetition, experimentation, accumulation of tangible/ technological capital, and from the firm's absorptive capacities.

Final factor is the external knowledge sourcing. While the importance of internal capabilities is widely recognized, innovation is not solely the result of interactions and processes within the organization, but also of interactions between the firm and other economic agents. In general, having a wider array of knowledge sources and tighter relationships with external actors may have positive impacts on firms' innovative performance.

In this study, we conduct an original survey gathered from the population of Hungarian winemakers. The original firm-level survey was conducted in 2022 to gather information on business and innovation strategies in the Hungarian wine industry. We investigate four types of innovation: product, technological, marketing and organizational innovation covering both the conventional and eco-innovation. For each dependent variables we estimate semi-nonparametric binary choice models.

Our results suggest that both conventional and eco-innovation are associated with internal factors. This partly reflects some peculiarities of Hungarian wine industry, which is consisting of small firms generally proceeding by internal experimentation, and trial and error. However, eco-innovation differs from conventional innovation in that it is more closely related to external sources of information, which are generally more technical and related to the environment. Finally, we find that the drivers of innovation differs by innovation types.

keywords: Eco-innovation, green innovations, capabilities, knowledge transfer, wine industry, Hungary

**File Upload (PDF only)**

- [Drivers-of-sustainable-innovation-in-Hungarian-wine-industry\\_Lekics-Valeria.pdf](#)

**Consent**

✓ I agree to the privacy policy.

You find the link to our privacy policy at the bottom of the page. In the privacy policy you find a link for exporting and/or erasing your personal data stored in our database.

## Drivers of sustainable innovation in Hungarian wine industry

The future of the wine industry in a context of changing environmental conditions has received increasing attention from the different research disciplines. Growing concerns on the uncertain future and the widespread adoption of new regulations regarding the industry's environmental footprint have prompted wineries to develop and adopt new environmental practices and technologies especially in developed countries. The opportunities and challenges associated with these transformative forces have concomitantly become an important subject of inquiry. The range of questions and methods to address this emerging topic, as well as the geographical scope of the cases analyzed, have expanded in recent years. However, the knowledge of how wine firms adopt and develop new sustainable practices and eco-innovations is still limited. In addition, new insights about eco-innovation have yet to be extended across a wider variety of geographical and institutional contexts. Although there is increasing literature on eco-innovation in wine sector in developed countries, the research on Central European countries is still scarce. Our research tries to fill this gap focusing on Hungary with rich tradition in wine making. More specifically, we address two questions. 1) To what extent do wine firms adopt and develop eco-innovations and conventional innovations? (2) Are there differences between drivers associated with eco-innovations and conventional innovations?

Hungary is a good example to investigate the innovation in wine sector. Since the fall of Communism winemakers are recovering traditional recipes and are experimenting with new techniques that existed before collectivization. The Hungarian Wine Society describes the sector as characterized by "a time of innovation, rivalries and rediscovery – attempts to define the Hungarian version of "international" grape varieties, and to recreate and rehabilitate their indigenous grapes". Vineyards are experimenting with new blends, new grape varieties in unfamiliar regions, and rediscovering lost varieties. A small number of large wine farms have received interest from Foreign Direct Investment, but the majority of the sector is still constituted by domestically owned, micro and small businesses. To illustrate, before transition about 30 large state societies and 50 cooperatives controlled the Hungarian wine production.

Recent literature, to which we relate more directly in our paper, addresses eco-innovation's distinctiveness in terms of underlying processes, drivers, and capabilities within the organization. A wide range of factors and determinants associated with conventional forms of innovation have been identified over the years. They range from internal capacities and resources to extra-organizational interactions and knowledge networks. It remains unclear whether the same determinants are associated with eco-innovation.

We focus on the three potential factors affecting the adoption of sustainable innovation. First factor relates to firm characteristics. Papers on innovation have long investigated the relationship between innovation and the general characteristics of the firm including firm size and age yielding inconclusive results.

Second factor relates to internal capabilities. Resource-based theories have emphasized the role that strategic capabilities and resources play in terms of innovation and competitiveness. The ability of firms to integrate, develop and recombine proprietary and complementary resources provides the foundation for dynamic capabilities and sustained competitive advantage. The development of these capabilities results in part from previous investments

in knowledge creation, repetition, experimentation, accumulation of tangible/ technological capital, and from the firm's absorptive capacities.

Final factor is the external knowledge sourcing. While the importance of internal capabilities is widely recognized, innovation is not solely the result of interactions and processes within the organization, but also of interactions between the firm and other economic agents. In general, having a wider array of knowledge sources and tighter relationships with external actors may have positive impacts on firms' innovative performance.

In this study, we conduct an original survey gathered from the population of Hungarian winemakers. The original firm-level survey was conducted in 2022 to gather information on business and innovation strategies in the Hungarian wine industry. We investigate four types of innovation: product, technological, marketing and organizational innovation covering both the conventional and eco-innovation. For each dependent variables we estimate semi-nonparametric binary choice models.

Our results suggest that both conventional and eco-innovation are associated with internal factors. This partly reflects some peculiarities of Hungarian wine industry, which is consisting of small firms generally proceeding by internal experimentation, and trial and error. However, eco-innovation differs from conventional innovation in that it is more closely related to external sources of information, which are generally more technical and related to the environment. Finally, we find that the drivers of innovation differs by innovation types.

keywords: Eco-innovation, green innovations, capabilities, knowledge transfer, wine industry, Hungary