Business Models in Platform Markets

An efficiency-driven analysis of electric vehicle manufacturers

Introduction

- A business model (BM) incorporates different components (Morris/Schindehutte/Allen, 2005 and Johnson/Christensen/Kagmann, 2008). The value creation architecture (VCA) as part of it (compare figure 1) not only includes actors of vertical value chains—i.e., it also takes horizontal (cooperating competitors) and lateral actors (e.g., service providers) into account (Dietl/Royer/Stratmann, 2009).
- Many markets can be described as two-sided platform markets (2SP) which are characterized by a triangular structure and indirect network effects (compare figure 3). The platform includes components and rules facilitating the interaction of the market sides (Eisenmann/Parker/Van Alstyne, 2008).

Main concept

- Analysis of the impact of the market structure, here two-sided platform markets, on the efficiency based choice of the firm boundary, hence its VCA as part of the focal actors BM.
- Transaction Cost Economics (TCE) as a widely applied and discussed concept of the new institutional economics (NIE) supplies efficiency determinants such as frequency, specificity and uncertainty (Williamson, 1975, 2010) and
  - additionally taking the determinant strategic importance (Picot, 1992) into account.
  - differently to the human factors opportunism, here the new concept of bounded reliability will be used instead (Verbeke/Greidanus, 2009) in addition to bounded rationality.
- On the basis of these TCE criteria a choice of the governance structure from the continuum between market and hierarchy can be made (compare figure 2): A high degree of asset specificity by high uncertainty and frequency e.g. would favor a hierarchical governance structure (in-house).
- This coherence of efficiency criteria and the choice of the firm boundary so far has been analyzed mainly without regard to the market characteristics. This role shall be taken into account here by focusing on platform markets.

Method

- Test of seven hypotheses which are operationalized for the case of electric passenger vehicles (EV) as a platform market (figure 3) applying the case study method with triangulation of mainly qualitative data including document analyses and expert interviews:
  1. The higher the specificity of a platform component,
  2. The higher demand uncertainty,
  3. The higher technological uncertainty,
  4. The higher the strategic importance of a platform component,
  5. The higher the frequency of a platform component,
  6. The higher the bounded reliability,
  7. The stronger the network effects,

...the higher the degree of integration of the focal platform architect (dependent variable).

Preliminary Conclusions

- Different degrees of integration within the e-mobility industry are existing (compare figure 4).
- In the mobilization phase of this industry for some players it seems to be important for being involved to a high degree in the infrastructure end of the value chain to support the weaker market side (B) to strengthen network effects.

Literature cited