Flying geese or lame ducks? Field-configuration and regional platforming – The Aviation Valley initiative in the Polish Podkarpackie Region

Lech Suwala

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Flying geese or lame ducks?
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Outline

A. Introduction

B.1 Trajectories of / Facts about the Polish Aviation Industry (PAI)

B.2 The Aviation Valley Initiative (AVI)

B.3 Field – Configuration and Platforming

C. Results

D. Conclusion
Outline

Research Questions:

- How did the path of the Aviation Valley initiative (AVI) evolve?
- What were the striking / crucial events (hereafter: FCE/FME) that paved the way?
- What type/direction of regional policy is behind this initiative?
A. Introduction

MTU Aero Engines baut Standort in Polen aus
Bebaute Fläche wird um 50 Prozent erweitert / Betrieb soll Ende 2014 aufgenommen werden

AFP 25.06.2013

MB Aerospace acquires operations in US, Poland

Financial Times

October 30, 2012 7:50 pm

US move keeps PZL on an upward path
The multi-million dollar deal to acquire Norbert’s operations in Michigan, USA and Rzeszów, Poland, means MB Aerospace now employs nearly 900 staff across North America and Europe.


Aerospace Manufacturing & Design 05.04.2014
A. Introduction

Polarised Poland?

Podkarpackie region (low-income region) (Kilroy / Aridi 2017, Benedek / Lembcke 2017)

Podkarpackie, its capital Rzeszów and surrounding provinces (47-52%) – still belonging to the poorest and most lagged regions in Poland (country average 68%) (GDP PPS per inhabitant against the EU28 average by NUTS 2 regions, 2017)

- “there is no airplane engine produced in the world now without at least one part produced in this region” (interviews E1, I1, P4)

Polish Railroad Network, 1953 (Samecki 1998)
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B.1 Regional Trajectories - PAI (Companies Genealogy 1912-2012)
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B.1 Company size - PAI

PAI 1988

PAI 2013
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B.1 Location -of PAI

Aviation Industry in Poland (2002)
### B.1 Stylized facts about PAI (2000-2017)

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rzeszów</strong>, Warszawa</td>
<td>4500, 3500</td>
<td>~5500</td>
</tr>
<tr>
<td><strong>Mielec</strong>, Swidnik,</td>
<td>2500-3500</td>
<td>2500-3500</td>
</tr>
<tr>
<td><strong>Kalisz</strong></td>
<td>1500</td>
<td></td>
</tr>
<tr>
<td><strong>Krosno</strong>, Wroclaw,</td>
<td>600-1200</td>
<td>600-1200</td>
</tr>
<tr>
<td>Bydgoszcz, Poznań, Lodz, Bielsko-Biała</td>
<td>215</td>
<td></td>
</tr>
<tr>
<td>Share of Podkarpackie</td>
<td>43%</td>
<td>43%</td>
</tr>
</tbody>
</table>

**Urban and regional shares of employment in PAI**

- **first tier cities**: Rzeszów, Warszawa
- **second tier cities**: Mielec, Swidnik, Kalisz
- **third tier cities**: Krosno, Wroclaw, Bydgoszcz, Poznań, Lodz, Bielsko-Biała
- **Sędziszów Małopolski**: 1400
- **Tążećina**: 900
B.1 Stylized facts about PAI (2000-2017)

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>employment</td>
<td>24986</td>
<td>35838</td>
</tr>
<tr>
<td>companies</td>
<td>~140</td>
<td>~250</td>
</tr>
</tbody>
</table>

3 pillars

- **Privatisation**, acquisition, modernization of large state-owned enterprises by foreign firms
  - number of firms in foreign hands doubled (1/3 -> 2/3)

- **Foreign greenfield investment** by ‘late comers / hidden champions’ (2009-2011 and from 2016)
  - at least 1,500 new-established workplaces

- Rise and rediscovery of domestic private companies, **SMEs**
  - employment ↑ 2,800 to 4,600
  - number ↑ 80 to 160
B.2 The case of the Aviation Valley Initiative (AVI)

Founded:

**11th April 2003 in Rzeszów** (19 representatives from 18 organizations (15 from commercial businesses - the aviation industry, 2 regional development agencies and 1 from a university)

Objectives:

1. Development and organization of a **cost-effective suppliers value chain** with local firms to deliver **non-core business activities** to comply with demand of UTC subsidiaries and their far-flung network
2. Close interaction w/ academia to set up an **educational and R & D system** with a continuous recruiting of young local talents /innovation
3. To exert meaningful **influence** on **EU/ Polish economic policy** favouring the aviation industry
4. To **popularise Southeast Poland** on the worldwide aviation landscape
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Locations of AVI members (Wozniak et al. 2015)
B.2 The case of the Aviation Valley Initiative (AVI)

Employment (total and in AV companies) and membership in AV cluster (Suwala/ Micek, forthcoming)
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B.3 Field-configuration and Platforming

The Idea of platforms:

The ‘technological, innovation and/or development (TID) platforms’
(Sah and Stiglitz, 1986), (Garud and Kumaraswamy, 1995, Robinson et al. 2007)

(1) systemic infrastructures for the organization and coordination of complex intertechnological, inter organisational or intersectoral processes (Sah and Stiglitz, 1986, Consoli / Patrucco 2008, 702)

(2) exploration and exploitation of a variety of options by maximizing the diversity of contributions stemming from variegated knowledge bases while maintaining coherence through transversal cognitive connections and a minimum level of hierarchy (Robinson et al 2007, 872, Lazzeretti et al. 2010, 31)

(3) dynamic trade-off between deeper specialisation and wider variety of the knowledge base (Kogut 2000).
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**B.3 Field-configuration and Platforming**

The Idea of regional development platforms (RDP)

(rooted in territorial innovations models and RIS literature):


<table>
<thead>
<tr>
<th>clusters</th>
<th>platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>science-based innovation</td>
<td>proactice-based innovation</td>
</tr>
<tr>
<td>(science, technology, innovation)</td>
<td>(doing, using, interacting -&gt; DUI mode)</td>
</tr>
<tr>
<td>-&gt; STI mode</td>
<td></td>
</tr>
<tr>
<td>analytical knowledge</td>
<td>synthetic knowledge</td>
</tr>
<tr>
<td>proximity (same value chain</td>
<td>distance (related variety. (urbanization</td>
</tr>
<tr>
<td>(agglomeration economies), economies of scale,</td>
<td>economies), economies of scope,</td>
</tr>
<tr>
<td>similair patterns of thought</td>
<td>sundry patterns of thought</td>
</tr>
<tr>
<td>atomistic and closed environments</td>
<td>relational and open environments</td>
</tr>
</tbody>
</table>

(see f.e. Harmaakorpi et al. 2017, p.1483)
B.3 Field-configuration and Platforming

RDP: “regional resource configurations based on the past development trajectories but presenting the future potential competitive advantage to produce existing in the defined resource configurations” (Harmaakorpi, 2006, p.1089)
B.3 Field-configuration and Platforming

The Idea of Field-configuring events (FCE):

**temporary social organizations** such as tradeshows, professional gatherings, technology contests, and business ceremonies that condense and contour the development of professions, technologies, markets, and industries


(1) business cards are bartered, reputations groomed, deals concluded, news shared, accomplishments acknowledged, standards agreed upon, and prevailing designs chosen

(Lampel and Mayer 2008, 1029)

(2) scholars experimented with **transformation processes** occurring when industry boundaries were shifted, emerging sectors came into life, new network forms arranged, and volatile ecosystems changed (Meyer et al. 2005 Lampel / Meyer 2008).

(3) assemble temporary bounded **opportunities** (from hours to days) where planned or **spontaneous opportunities** for direct social interaction often with symbolic constituent parts, and incidents for information exchange and **collective sense-making** emerge, low hierarchies

(Lange et al. 2014)
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B.3 Field-configuration and Platforming

The Idea of Field-configuring events in regional studies:

- actors from diverse professional, organizational, and geographical backgrounds assemble in and necessitate one location (Lampel and Mayer 2008, 1029)

(1) spatiality of temporary or cyclical clusters and the exchange of knowledge or generation of innovation therein (Bathelt et al. 2004; Maskell et al. 2006; Power/Jansson 2008)

(2) ‘spatialities or geographies of FCE’, relational perspective, beyond the rather descriptive concepts of temporary and cyclical clusters towards an analysis of cognitive, social and economic structuring among institutionally embedded actors (Lange et al. 2014)

(3) interplay between different spaces or scales that matters most for regional scientists with regard to innovation (knowledge transfer over distance (Maskell 2014, Schüssler et al. 2015),
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B.3 Field-configuration and Platforming

Confluence of both approaches:

**orchestration** and framing of **novel, spontaneous and unexpected gatherings**, constellations and collaboration among stakeholders from rather (un)related backgrounds (Suwala / Micek, forthcoming)

These gatherings, however, are not only bringing these stakeholders together in space, but also **structure cognitive, social, economic and spatial patterns** and negotiate power relations (Suwala / Micek, forthcoming)

Rhetorics:

‘orders of worth’ (McInerney 2008, 1092), ‘tournaments of value’ (Anand/ Watson 2004, 60), ‘meta races’ (Garud 2008, 1081) or ‘spaces for play’ (Lange et al. 2014, 193); in addition, they provide ‘ecologies of learning’ and emphasize platforms or events as ‘arenas of emergence’ (Lampel/ Mayer 2008, 1027), ‘combinatorial platforms’ (James / Halkier 2016, 832) ‘innovation platforms’ (Uotila et al. 2012) or ‘areas of innovation and learning’ (Schüssler et al. 2015, 165)
C. Methodology / Results

✔ analysis of this regional policy initiative
   (mixed approach both using quantitative and qualitative data)

- **Quantitative data:**
  - **events database** from various sources (200 events such as trade fairs, conferences, seminars etc., 2003-2017) attended by members that might have been decisive in shaping the path of the AVI
  - **EMIS data** (derived from Dun & Bradstreet), **PAIIZ** (Polish Information and Foreign Investment Agency), ‘waybackmachine’ ([https://web.archive.org/](https://web.archive.org/), AVI’s website ([www.dolinalotnicza.pl](http://www.dolinalotnicza.pl)), newspapers & magazines queries

- **Qualitative data:**
  - 45 qualitative interviews that have been made with different stakeholders (business, administrative entities, academia, and intermediaries)
  - In-depth interviews with all 6 members in the Board of Directors of the AVI
Evolutionary path of the Aviation Valley Initiative including FCE & FME
(Suwala/ Micek, forthcoming)
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C. Results

Evolutionary path of the Aviation Valley Initiative including FCE & FME (Suwala/ Micek, forthcoming)
High Level Group (HLG) on Aviation and Aeronautics Research

Vice-President Slim Kallas and Commissioner Geoghegan-Quinn on Aviation and Aeronautics Research in December 2010, set to work!

Gathering representatives from infrastructure, vehicle, operators, and others, the Group fed its thoughts into what has been presented as a 2050 Vision.

Vice-President Kallas made it clear that, together with Member States, this approach is from a supply-driven towards a truly demand-driven one, with industrial priorities with a clear EU added value, so as to compete whilst meeting our energy and environmental challenges.

Experts of the High-Level Group on Aviation and Aeronautics Research:
- Marek Darecki
- Charles Edelstine
- Tom Enders
- Emma Fernandez
- Peter Hartman
- Jean-Paul Herteman
- Michael Kerkloh
- Ian King
- Patrick Ky
- Michel Mathieu

(EC 2017, PAIIZ 2012)
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Members of the EACP (EACP 2015)
System of education in Aviation Valley

Universities / Aeronet, 80 M

High schools, grammar schools / CEKSO, “Flying physics”, 30 M$
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Podkarpackie 2020 strategy (Wozniak et al. 2013)

Podkarpackie Clusters Forum (Darecki 2015)
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EUROPEAN DEFENCE FUND

RESEARCH WINDOW
Collaborative research projects

COORDINATION BOARD
Member States, High Representative, European Defence Agency, European Commission, Industry

CAPABILITY WINDOW
Joint defence capabilities

- EUR 90 million until 2020
- EUR 500 million per year post-2020

- Umbrella structure*
- Reference amount EUR 5 billion per year

*establishing a common framework for independent projects and providing back office

Idea of the European Defence Fund
(EC 2016. 2017)
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RDP of the AVI for the Podkarpackie Region (Suwala/ Micek, forthcoming)

Aviation Valley Initiative (AVI) members

National and EU-funding framework programmes and projects

Institutional back-up
Internal structures and committees (SME) Bi-/multilateral memberships (EACP)

Research excellence centres
Centre of Advanced Technology „AERONET“ Research centres and laboratories at polytechnical university

Educational support system
Custom-tailored university degree programmes VET-centres in mid-size towns Children’s university and aviation show truck

Space technology
Polish Aeronautical Technology Platform, Dual-use cluster

Health innovation and tourism cluster

IT cluster in Podkarpackie

Forging cluster (COMCAST)

Welding cluster (KLASTAL)

Life quality cluster „Podkarpackie Country“

Organic food cluster

Podkarpackie Science and Technology Park „AEROPOLIS“

Rzeszów Regional Development Agency

Rzeszów City Administration

Industrial Development Agency Special Economic Zones

Plastics processing cluster (POLIGEN)

Podkarpackie Regional Government Rzeszów-Jasionka Airport

High intensity of links

Low intensity of links

ROP Podkarpackie, 2014-2020 Podkarpackie Clusters Forum
D. Conclusion

Main takeaways:

Policy process:

1. **pre-formation** - consolidation of the erstwhile diversified state-owned conglomerates towards specialization, the formation phase obviously reinforced this **cluster-based policy**

2. **reactivating** the lateral potential of AI in the region (e.g. outsourced entities of the former conglomerates, SME in related industries) for their own purposes

3. **collaborating** with related (e.g. space technologies) and distant industries (e.g. life quality) to create a **genuine platform** and to revived the ecosystem of the region as a whole, before it is too late, **specialisation + (re)diversification**

Success factors:

1. **Enthusiast** long-term vision, close corporation w/ administration, academia and policy makers (mass of small events), plus **strategic FCE and FME**

2. **first-mover advantage** in many measures, strategic events settings, long-term ideas beyond funding periods with the same personal

3. **Developing a future agenda** – megatrend, based on past trajectories and existing resources to build a future competitive advantage
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Thank you for attention!

For further comments or suggestions:
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