

DELIVERABLE

## Final reports D2.2, D3.4, D3.5 and D4.4 dissemination (on social media)

### Deliverable Information

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# BIGPROD dissemination in social media

BIGPROD project has been actively disseminating all outcomes from the project. The strategy has been to openly share as much of the research and underlying data as possible. The main avenues of disseminating the data have been the project website,<sup>1</sup> a dedicated Dataverse repository,<sup>2</sup> and a dedicated ResearchGate project page set up for the project.<sup>3</sup> In addition to the repositories, social media has been used as an additional tool for communicating on project outcomes.

The project has focused on actively promoting the various outcomes from the different work packages, mainly using Twitter as a communication tool. As an example from work package 4, the MethodsX journal publication by



Figure 2 Tweet on pre-print manuscript.



Figure 1 Tweet on MethodsX publication

Hajikhani et al.<sup>4</sup> was shared on Twitter. The tweet thread highlighted the main outcomes of the publication, namely how BIGPROD data allows for 1) cross referencing companies' activities in their websites to a scientific theme, 2) understanding the breadth and depth of companies' activity (comparing to e.g. NACE) and 3) measuring thematic structures in firm activity. The example shows how platforms like Twitter allow for disseminating the core message in a concise manner, while reaching a broad audience. The tweet in question was

<sup>1</sup> Project website: <https://www.bigprod.eu>  
<sup>2</sup> Project Dataverse repository: [https://dataverse.nl/dataverse/BIGPROD\\_Data\\_Sample](https://dataverse.nl/dataverse/BIGPROD_Data_Sample)  
<sup>3</sup> Project ResearchGate repository: <https://www.researchgate.net/project/BIGPROD-Addressing-the-Productivity-Paradox-with-Big-Data>  
<sup>4</sup>Hajikhani, A., Pukelis, L., Suominen, A., Ashouri, S., Schubert, T., Notten, A., & Cunningham, S. W. (2022). Connecting firm's web scraped textual content to body of science: Utilizing microsoft academic graph hierarchical topic modeling. MethodsX, 9, 101650. <https://doi.org/10.1016/j.mex.2022.101650>

retweeted by the project team members and as a result has gathered some 1600 views and 49 actions taken by readers.

The project has also actively used pre-prints, and archiving in repositories, as a mechanism to fast-track early discussion on project findings.<sup>5</sup> This allows for moderating the effects of long lead times in publishing and to having scholars gaining early access to the outcomes from the project. In Figure 2 Torben Schubert disseminated the project outcome on measuring AI capabilities productivity impacts using job openings data matched to Orbis based financial data. The manuscript was posted on CIRCLE working paper series<sup>6</sup> and is open access. Subsequently the full manuscript has been submitted to a journal for review.

In addition to using Twitter and social media as a tool for promoting project outcomes, social media was used to promote the different stakeholder events organized by the project. This was used as a mechanism to complement the personal invitations to key stakeholders made by the project team. A case in point was the webinar and focus group on the three pilots run by work package 4. The webinar was promoted online



Figure 4 Tweet disseminating policy brief.

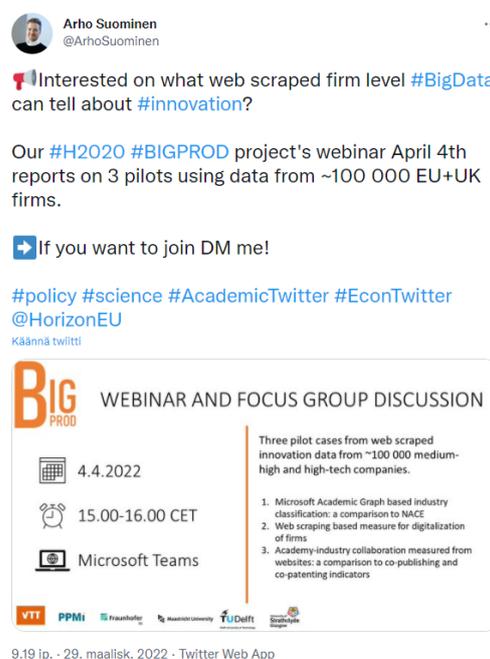


Figure 3 Promoting BIGPROD stakeholder events via Twitter.

(Figure 3), which resulted in several message to join the event. The promotional tweet was seen by 1491 users and led to 64 users acting on the content.

After the event social media was again leveraged to promote the recording made from the webinar. This allowed the team to gain further exposure to the organized webinar and focus group. For personal data protection reasons, the questions and answers portions of the events were excluded from the recordings share online.

The final reports from the project were also shared online. The final report from work

<sup>5</sup> Schubert, Torben & Jäger, Angela & Türkeli, Serdar & Visentin, Fabiana, 2020. "Addressing the productivity paradox with big data: A literature review and adaptation of the CDM econometric model," MERIT Working Papers 2020-050, United Nations University - Maastricht Economic and Social Research Institute on Innovation and Technology (MERIT). <https://ideas.repec.org/p/unm/unumer/2020050.html>

<sup>6</sup> Bäck, Asta & Hajikhani, Arash & Jäger, Angela & Schubert, Torben & Suominen, Arho, 2022. "Return of the Solow-paradox in AI? AI-adoption and firm productivity," Papers in Innovation Studies 2022/1, Lund University, CIRCLE - Centre for Innovation Research. [https://ideas.repec.org/p/hhs/lucirc/2022\\_001.html](https://ideas.repec.org/p/hhs/lucirc/2022_001.html)

package 2 on the econometric model, including an updated literature review, was shared online.<sup>7</sup> The link was disseminated via social media<sup>8</sup> with relevant hashtags on policy, big data and productivity. For work package 4, the policy brief was made publicly available on the Dataverse repository.<sup>9</sup> This was followed by the main outcomes being shared in Twitter<sup>10</sup> and LinkedIn,<sup>11</sup> as seen in Figure 4. For the final reports from work package 3, which were more technical focusing on the data platform and GDPR, the reports were also included to the Dataverse repository.<sup>12</sup> The deliverables were disseminated on social media<sup>13</sup> together due to the technical focus of the documents.

The social media dissemination has reached a relatively large stakeholder group. The tweet on report 2.2 has been seen by 211 users. Posting on report 4.4 have reached 421 users on Twitter and 341 on LinkedIn. For report 3.4 the tweet has reached 219 users.

Arho Suominen  
@ArhoSuominen

Summing up our #BIGPROD project, the #DataScience platform created by colleagues at PPMI web scraped ~96 000 firms in the EU+UK creating variables for firm:

1. #digitalization.
2. collaboration &
3. knowledge depth

Details on the system works 📌

[dataverse.nl/dataverse/BIGP...](https://dataverse.nl/dataverse/BIGP...)  
Käännä twiitti

The diagram illustrates the data flow across three areas:

- Area 2:** Data sources include Company Websites, Other websites, and Structured Databases (EURO, PATSTAT, etc.). These feed into a NetSQL Document Database hosted by PPMI. Below this, it notes 'Data mining and structuring scripts'.
- Area 1:** Features Jupyter Partner access, Project Internal Database, and Project Public Database. A note states: 'Company level data is published on the main project database. Each partner has access to the database to pull required data (for analysis or indicator construction)'. Below this, it notes: 'A subset of data which can be exposed to the public (anonymised, aggregated data for specified indicators) is sent to a smaller DB, which can be accessed from outside.'
- Area 3:** Features Jupyter, a Table, Row 1, and Row 2. A note states: 'Project Public data can be accessed through Jupyter Notebook Server. Jupyter server has access to the public data DB and contains sample tables and visualizations which can be reviewed by the user.'

Figure 5 Tweet disseminating reports 3.4 and 3.5.

<sup>7</sup> Access via Dataverse <https://doi.org/10.34894/8GACJV>

<sup>8</sup> Tweet on report 2.2 <https://twitter.com/ArhoSuominen/status/1518661337672474632>

<sup>9</sup> Access via Dataverse <https://doi.org/10.34894/9DSWVT>

<sup>10</sup> Tweet on report 4.4 <https://twitter.com/ArhoSuominen/status/1518656840757911554>

<sup>11</sup> LinkedIn post on report 4.4 <https://www.linkedin.com/feed/update/urn:li:activity:6924423078303141888/>

<sup>12</sup> Access via Dataverse [https://dataverse.nl/dataverse/BIGPROD\\_Data\\_Sample](https://dataverse.nl/dataverse/BIGPROD_Data_Sample)

<sup>13</sup> Tweet on report 3.4 and 3.5 <https://twitter.com/ArhoSuominen/status/1518864114302472192>

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## About BIGPROD

BIGPROD is a research project focusing on Big Data based analysis of productivity using webscraped data. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 870822.

The project partners in the project are Quantitative Science and Technology Studies team, Foresight-driven Business Strategies, 1) VTT Technical Research Centre of Finland, Competence Center Innovation and Knowledge Economy (Coordinator), 2) Fraunhofer ISI, Economics of Knowledge and Innovation team, 3) UNU-MERIT, Maastricht University, 4) Public Policy and Management Institute, 5) Economics of Technology and Innovations, Faculty of Technology, Policy and Management, Delft University of Technology, 6) Department of Politics, School of Government and Public Policy, Faculty of Humanities and Social Sciences, University of Strathclyde



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