

Last updated: 22 November 2021

# Access to micro-data

Guidelines for the assessment of research entities, applicants and research proposals





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# 1 | Rationale for the EIF guidelines to access microdata

The European Investment Fund (EIF, the Fund) recognises the importance of informed policymaking and the role of high quality scientific research to guide the enhancement of policies aimed at achieving the goals of the European Union. In this context, microdata are key to designing projects and formulating policies, targeting interventions and monitoring and measuring the impact and results of projects, interventions and policies.

#### **Box 1: Definition of microdata**

Microdata are unit-level data obtained from EIF administrative systems. They provide information about characteristics of individual entities benefitting from the policy instruments of the EIF, as supported under a wide number of mandates from the European Union. Micro-data allow in-depth understanding of socio-economic issues by studying relationships and interactions among phenomena. From a data producer's perspective, microdata are the form from which all other data outputs are derived and are the primary form that data are stored in.

At the same time, the EIF notes that procedures and practices are indispensable to protect the commercial interests of EIF's counterparts and the Fund itself. Moreover, the EIF, prior to granting access to any external researcher, should ensure that personal data have been duly anonymised. Doing so, the EIF should avoid any potential risk of breaching the data protection Regulation. Against this backdrop, the following document outlines a proposed approach towards the sharing of microdata of EIF's activity with external researchers. In line with The United Nations Economic Commission for Europe (UNECE), four principles lie at the basis of the proposed approach (see Box 2).

#### Box 2: Core principles for the access to EIF microdata

Principle 1: It is appropriate for microdata collected for administrative purposes to be used for statistical analysis to support research as long as confidentiality is protected.

**Principle 2:** Microdata should only be made available for research purposes.

Principle 3: Provision of microdata should be consistent with legal and other necessary arrangements that ensure that confidentiality of the released microdata is protected.

Principle 4: The procedures for researcher access to microdata, as well as the uses and users of microdata, should be transparent and publicly available.

Source: based on (UNECE, 2007)

On the one hand, the EIF guidelines should allow a transparent and non-discriminatory procedure to request EIF microdata for research purposes (Principle 4 above). On the other hand, the restrictions set forth in the guidelines should ensure the safeguarding of the interest of EIF's counterparts and the Fund itself, excluding cases in which there would be clear abuse of the EIF microdata (Principles 1 to 3 above).

<sup>&</sup>lt;sup>1</sup> Regulation (EU) 2018/1725 of the European Parliament and of the Council of 23 October 2018 on the protection of natural persons with regard to the processing of personal data by the Union institutions, bodies, offices and agencies and on the free movement of such data.



## 1.1 | Access EIF microdata: overview of the proposed procedure

This document proposes a four-step approach to access EIF microdata. The rationale of the proposed approach is to balance the core principles presented above. In this respect, this document leverages on a number of identified best practices currently adopted in a number of international institutions (e.g. European Commission, United Nations, World Bank).

Access to EIF microdata shall be granted, in a transparent and non-discriminatory way, to all eligible researchers from recognised research entities upon presentation of an appropriate research proposal and a declaration of individual confidentiality.

- 1. The EIF may grant access to confidential data for scientific purposes provided that such access is requested by a research entity recognised by the European Commission (Eurostat).<sup>2</sup> Section 2 provides an overview of this step.<sup>3</sup> Once the research entity is recognised, eligible researchers (see point 2) from the entity are allowed to submit research proposals.
- 2. A researcher from a recognised research entity may be granted access to EIF microdata provided that s/he is affiliated to the research entity through an employment contract that provides them with the ranking of "full" or "associate" professor (or equivalent ranking)<sup>4</sup> at the recognised research entity. In addition, to be considered eligible, researchers must prove their established knowledge of their research domain. Established knowledge is verified on the basis of relevant scientific works, i.e. scientific works falling in a pre-defined list of scientific domains of relevance to the EIF.

There are two conditions that must be simultaneously met by researchers affiliated to recognised entities in order to be considered eligible:

- a. Eligible researchers must submit proof of at least three original and relevant scientific works published prior to the date of application for EIF's microdata.
- b. Eligible researchers must submit proof of at least one original and relevant scientific work published prior to the date of application for EIF's microdata in a Journal that, in the year of the scientific work's publication, had an "impact factor" of 0.75 or above, as calculated by the Journal Citation Reports (JCR).

Section 3 provides definitions for these eligibility criteria as well as a detailed overview of this step.

- 3. Eligible researchers affiliated to recognised research entities may be granted access to EIF microdata provided they submit the following documents to the EIF:
  - a. An appropriate research proposal,
  - b. Confidentiality undertaking,
  - c. Individual confidentiality declaration.

The definition and details of appropriate research proposals are discussed in Section 4.

4. Approved research proposals will be granted access to partially anonymised data (scientific-use files) stored on a secure platform.

<sup>&</sup>lt;sup>2</sup> A list of the currently recognised by the European Commission (Eurostat) research entities is available at https://ec.europa.eu/eurostat/documents/203647/771732/Recognised-research-entities.pdf (retrieved 05/2021).

<sup>&</sup>lt;sup>3</sup> Appendix A summarises the criteria to be fulfilled by research entities according to Eurostat's Regulation.

<sup>&</sup>lt;sup>4</sup> The equivalent ranking covers non-academic institutions, and includes any staff member of the non-academic institution (thus excluding trainees, consultants and other external agents).



## 2 | Recognised research entities

The definition of "recognised research entity" follows Article 3 of the Commission Regulation (EU) No 557/2013 of 17 June 2013 implementing Regulation (EC) No 223/2009 of the European Parliament and of the Council on European Statistics as regards access to confidential data for scientific purposes (hereinafter referred to as "Regulation").

Appendix A summarises the criteria to be fulfilled by research entities according to the Regulation and describes the practical arrangements for assessing them.

In the case of a network project, each network partner requesting access to confidential data for scientific purposes must be recognised as a research entity (a confidentiality undertaking must be signed for all research entities participating in the project). One research proposal may be submitted covering all members of the project. Each researcher requiring access to confidential data has to submit a confidentiality declaration. The research proposal must be signed by the principal researcher and countersigned by the contact person in the coordinating research entity. The duly designated representatives of the research entities participating in the project or the contact persons in these research entities must be informed of the submission of the research proposal in which researchers from the entity are taking part.

## 3 | Eligible researchers

A researcher from a recognised research entity may be granted access to EIF microdata provided that s/he is affiliated to the research entity through an employment contract that provides them with the ranking of "full" or "associate" professor (or equivalent ranking) at the recognised research entity (see Section 2). The link between the researcher and the research entity must allow the research entity to impose disciplinary sanctions on the researcher in the event of negligent or deliberate misuse of data.

In addition, eligible researchers must prove their established knowledge of their research domain. Established knowledge is verified on the basis of relevant scientific works (Box 3).

#### **Box 3: Definition of relevant scientific work**

A relevant scientific work covers a scientific domain that is relevant to the institutional objectives of the EIF. Appendix B provides a list of relevant domains from the Journal of Economic Literature (JEL). Any original and published scientific work with at least one relevant JEL code as per Appendix B is considered a relevant scientific work.

There are two conditions that must be simultaneously met by researchers affiliated to recognised entities in order to be considered eligible:

- 1. Eligible researchers must submit proof of at least three original and relevant scientific works published prior to the date of application for EIF's microdata.
- 2. Eligible researchers must submit proof of at least one original and relevant scientific work published prior to the date of application for EIF's microdata in a Journal that, in the year of the scientific work's publication, had an "impact factor" of 0.75 or above (See Box 4), as calculated by the Journal Citation Reports (JCR).



#### **Box 4: The impact factor**

The impact factor is a scientometric index that reflects the yearly average number of citations that recent articles published in a given journal received. It is frequently used as a proxy for the relative importance of a journal within its field; journals with higher impact factors are often deemed to be more important than those with lower ones. The impact factor was devised by the Institute for Scientific Information (ISI) and is calculated for journals indexed in the Journal Citation Report (JCR).

In any given year, the impact factor of a journal is the number of citations, received in that year, of articles published in that journal during the two preceding years, divided by the total number of "citable items" published in that journal during the two preceding years.

The impact factor is useful in clarifying the significance of absolute (or total) citation frequencies. It eliminates some of the bias of such counts, which favour large journals over small ones, or frequently issued journals over less frequently issued ones, and of older journals over newer ones. Particularly in the latter case, such journals have a larger citable body of literature than smaller or younger journals. All things being equal, the larger the number of previously published articles, the more often a journal will be cited.

| Figu | re: calculation for journal impact factor. Example year 1992        |
|------|---|
| A=   | total cites in 1992   |
| B=   | 1992 cites to articles published in 1990-91 (this is a subset of A) |
| C=   | number of articles published in 1990-91                             |
| D=   | B/C = 1992 impact factor  |

Source: authors, based on https://clarivate.com/webofsciencegroup/essays/impact-factor/.

The use of the impact factor threshold is motivated by the necessity to ensure the applicant's established knowledge of their research domain. Despite some limitations, the impact factor provides a reliable and objective measure to rank the quality of journals in terms of the (relative) number of citations they receive. Journals with a high impact factor tend to host more "influential" scientific works and, in order to maintain their ranking, such journals tend to be more selective in their publication process.

The threshold of 0.75 is based on the observation in (Brzezinski, 2014), which calculated that the median impact factor in the field of Economics is 0.795 (in the year 2012).<sup>5</sup> The threshold thus attempts at capturing "top half" journals in the field. Against this backdrop, the threshold may be regularly updated by the EIF if new information about the distribution of the JCR impact factor becomes available.

## 4 | Access to EIF's microdata

All eligible researchers from recognised research entities may access EIF's microdata upon presentation of an appropriate research proposal, a confidentiality undertaking and a declaration of individual confidentiality. Eligible researchers need to submit proof of their eligibility as noted in Section 3 as well as the previously indicated documents to EIF-microdata-access@eif.org.

## 4.1 | Appropriate research proposal

The maximum duration of a research project is five years. A research proposal template can be found in Appendix D. The research proposal must state in sufficient detail the following:

#### 1. The legitimate purpose of the research;

<sup>&</sup>lt;sup>5</sup> According to the author, the distribution did not significantly fluctuate with respect to previous years.



- 2. The explanation as to why this purpose cannot be fulfilled using non-confidential data;
- 3. The entity requesting access;
- 4. The individual researcher(s) who will have access to the data;
- 5. the data points to be accessed, the methods of analysing them;
- 6. the intended results of the research to be published or otherwise disseminated.

The research proposal must include information on the person requesting access, his or her research entity, the data requested and the mode of access. The criteria require that the research proposal state the legitimate purpose of the research, i.e. a scientific purpose, and that the results of the research are to be made public. The planned outputs (articles, presentations, books, etc.) have to be specified in the research proposal. The need to use microdata for the research project should be justified.

Research proposals have to be countersigned by the contact person in the entity and be accompanied by individual confidentiality declarations signed by the researchers who will have access to the data. An individual confidentiality declaration has to be signed by each researcher taking part in the project.

The contact person confirms by his/her signature that all persons named in the research proposal are employed by, respectively in the case of senior students formally related to, the research entity. The contact person shall inform researchers named in the research proposal about the obligations described in the terms of use of confidential data. In the process of assessing the research proposal, the relevant requirements of data protection legislation are taken into account.

## 4.2 | Assessment of the research proposal

Appropriate research proposals are assessed by the EIF, taking into account the opinion of the technical unit responsible for the requested data. The standard consultation period is 6 weeks. This period may be extended by eight further weeks where necessary, taking into account the complexity and the number of the requests to be processed by the EIF.

Eligible researchers might be required to submit additional information at the discretion of the EIF in order to provide e.g. additional details regarding any of the core elements of the research proposal.

The research proposal (research team, research objectives and methods) will be registered but will not require a specific contract. EIF will attach to the data file the terms of use of the confidential data for scientific purposes.

## 5 | Granting access to microdata

Once the EIF approves the appropriate research proposal, it will grant to eligible researchers, and subject to mandates' requirements, the access to partially anonymised data (scientific-use files) stored on a secure platform.

# 6 Changes to a previously approved research proposal

Once a research proposal has been accepted, new researchers can be added (provided they sign a confidentiality declaration), and the duration of the project can be extended.



The adding of new datasets and/or new releases to an existing research proposal requires a new research proposal to be submitted.

# 7 | Closing of project

Access to microdata is only valid for the period specified in the research proposal, and up to a maximum of five (5) years. At the end of that period, eligible researchers must:

- 1. destroy any original scientific-use files sent by the EIF and any confidential data derived from the files, and
- 2. provide the EIF with their research results.

In deciding on the project end-date, eligible researchers should take into account the length of the process of publication of research results, which leverages on the access to data.

## References

Brzezinski, M., 2014. Empirical modeling of the impact factor distribution. *Journal of Infometrics*, 8(2), pp. 362-368.

UNECE, 2007. Managing statistical confidentiality & microdata access, s.l.: https://unece.org/fileadmin/DAM/stats/publications/Managing.statistical.confidentiality.and.microdata.acces s.pdf.



### Appendix A – Research entities: Eurostat's guidelines for assessment<sup>6</sup>

Given the Commission Regulation (EU) No 557/2013 of 17 June 2013 implementing Regulation (EC) No 223/2009 of the European Parliament and of the Council on European Statistics as regards access to confidential data for scientific purposes (hereinafter referred to as "Regulation"):

Article 3 (General principles) of the Regulation states that the Commission (Eurostat) may grant access to confidential data for scientific purposes provided that such access is requested by a recognised research entity. This section summarises the criteria to be fulfilled by research entities according to the Regulation and describes the practical arrangements for assessing them.

#### **Assessment Criteria**

Article 4 of the Regulation stipulates that recognition of research entities is to be based on criteria referring to:

- 1. purpose of the entity; assessment of the purpose of the entity shall be carried out on the basis of its statute, mission or other declaration of purpose; the purpose of the entity shall include reference to
- 2. established record or reputation of the entity as a body producing quality research and making it publicly available; the experience of the entity in carrying out research projects shall be assessed on the basis of, inter alia, available lists of publications and research projects in which the entity was involved:
- 3. internal organisational arrangements for research; the research entity shall be a separate organisation with legal personality, focused on research or a research department within an organisation; the research entity must be independent, autonomous in formulating scientific conclusions and separated from policy areas of the body to which it belongs;
- 4. safeguards in place to ensure security of the data; the research entity shall fulfil technical and infrastructure requirements assuring security of the data.

#### Practical arrangements for assessment (recognition procedure)

To be recognised as a research entity, any entity must submit the following documents to Eurostat:

- 1. Application form<sup>7</sup> filled in and signed by the research entity's duly designated representative;
- 2. Confidentiality undertaking<sup>8</sup> and terms of use,<sup>9</sup> filled in and signed by the research entity's duly designated representative.

Eurostat assesses the information provided in the above-mentioned documents. If the assessment is positive, published website name research entity the Eurostat (http://ec.europa.eu/eurostat/web/microdata/overview).

<sup>&</sup>lt;sup>6</sup> Retrieved 05/2021 from: https://ec.europa.eu/eurostat/documents/203647/771732/guidelines-assessment.pdf

<sup>&</sup>lt;sup>7</sup> Annex 11.1. of https://ec.europa.eu/eurostat/documents/203647/771732/guidelines-assessment.pdf

<sup>8</sup> Annex 11.2/3 of https://ec.europa.eu/eurostat/documents/203647/771732/guidelines-assessment.pdf

<sup>&</sup>lt;sup>9</sup> Annex 11.4 of https://ec.europa.eu/eurostat/documents/203647/771732/guidelines-assessment.pdf



#### Appendix B – Eligible JEL subcategories for relevant scientific works

A relevant scientific work covers a scientific domain that is relevant to the institutional objectives of the EIF. The table below provides a list of relevant domains from the Journal of Economic Literature (JEL). Any original and published scientific work with at least one relevant JEL code as per the table below is considered a relevant scientific work.

| Primary JEL category | Secondary JEL subcategory                      | Tertiary JEL subcategory  |
|----------------------|--|---|
| D. Microeconomics    | D0 - General                                   | D04 - Microeconomic Policy: Formulation,<br>Implementation, and Evaluation                        |
| D. Microeconomics    | D2 - Production and Organizations              | D20 - General   |
| D. Microeconomics    | D2 - Production and<br>Organizations           | D21 - Firm Behavior: Theory   |
| D. Microeconomics    | D2 - Production and<br>Organizations           | D22 - Firm Behavior: Empirical Analysis   |
| D. Microeconomics    | D2 - Production and Organizations              | D23 - Organizational Behavior ; Transaction Costs ;<br>Property Rights                            |
| D. Microeconomics    | D2 - Production and Organizations              | D24 - Production; Cost; Capital; Capital, Total<br>Factor, and Multifactor Productivity; Capacity |
| D. Microeconomics    | D2 - Production and Organizations              | D25 - Intertemporal Firm Choice: Investment,<br>Capacity, and Financing                           |
| D. Microeconomics    | D2 - Production and<br>Organizations           | D26 - Crowd-Based Firms   |
| D. Microeconomics    | D2 - Production and Organizations              | D29 - Other   |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D40 - General   |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D41 - Perfect Competition   |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D42 - Monopoly  |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D43 - Oligopoly and Other Forms of Market<br>Imperfection   |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D44 - Auctions  |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D45 - Rationing ; Licensing   |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D46 - Value Theory  |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D47 - Market Design   |
| D. Microeconomics    | D4 - Market Structure, Pricing, and Design     | D49 - Other   |
| D. Microeconomics    | D5 - General Equilibrium and Disequilibrium    | D50 - General   |
| D. Microeconomics    | D5 - General Equilibrium and Disequilibrium    | D51 - Exchange and Production Economies   |
| D. Microeconomics    | D5 - General Equilibrium and Disequilibrium    | D52 - Incomplete Markets  |
| D. Microeconomics    | D5 - General Equilibrium and Disequilibrium    | D53 - Financial Markets   |
| D. Microeconomics    | D5 - General Equilibrium and Disequilibrium    | D57 - Input-Output Tables and Analysis  |
| D. Microeconomics    | D5 - General Equilibrium and<br>Disequilibrium | D58 - Computable and Other Applied General Equilibrium Models                                     |
| D. Microeconomics    | D5 - General Equilibrium and Disequilibrium    | D59 - Other   |
| D. Microeconomics    | D6 - Welfare Economics                         | D61 - Allocative Efficiency ; Cost-Benefit Analysis   |
| D. Microeconomics    | D6 - Welfare Economics                         | D62 - Externalities   |
| D. Microeconomics    | D6 - Welfare Economics                         | D64 - Altruism ; Philanthropy ; Intergenerational Transfers                                       |



| Primary JEL category                        | Secondary JEL subcategory  | Tertiary JEL subcategory   |
|---|--|--|
| D. Microeconomics                           | D7 - Analysis of Collective<br>Decision-Making   | D73 - Bureaucracy ; Administrative Processes in Public Organizations ; Corruption            |
| D. Microeconomics                           | D7 - Analysis of Collective  | D78 - Positive Analysis of Policy Formulation and  |
| D. Microeconomics                           | Decision-Making D8 - Information, Knowledge,   | Implementation D80 - General   |
|   | and Uncertainty  |  |
| D. Microeconomics                           | D8 - Information, Knowledge, and Uncertainty   | D81 - Criteria for Decision-Making under Risk and Uncertainty                                |
| D. Microeconomics                           | D8 - Information, Knowledge, and Uncertainty   | D82 - Asymmetric and Private Information ;<br>Mechanism Design                               |
| D. Microeconomics                           | D8 - Information, Knowledge,   | D83 - Search ; Learning ; Information and  |
| D. Microeconomics                           | and Uncertainty D8 - Information, Knowledge,   | Knowledge ; Communication ; Belief ; Unawareness D84 - Expectations ; Speculations           |
| D. Microeconomics                           | and Uncertainty  D8 - Information, Knowledge, and Uncertainty                                    | D86 - Economics of Contract: Theory  |
| E. Macroeconomics and<br>Monetary Economics | E2 - Consumption, Saving,<br>Production, Investment, Labor                                       | E22 - Investment ; Capital ; Intangible Capital ;  |
|   | Markets, and Informal Economy  | Capacity   |
| E. Macroeconomics and<br>Monetary Economics | E2 - Consumption, Saving,<br>Production, Investment, Labor<br>Markets, and Informal Economy      | E23 - Production   |
| E. Macroeconomics and                       | E2 - Consumption, Saving,  | E24 - Employment ; Unemployment ; Wages ;  |
| <b>Monetary Economics</b>                   | Production, Investment, Labor<br>Markets, and Informal Economy                                   | Intergenerational Income Distribution; Aggregate Human Capital; Aggregate Labor Productivity |
| E. Macroeconomics and                       | E3 - Prices, Business  | E31 - Price Level ; Inflation ; Deflation  |
| Monetary Economics E. Macroeconomics and    | Fluctuations, and Cycles E3 - Prices, Business   | E32 - Business Fluctuations ; Cycles   |
| Monetary Economics                          | Fluctuations, and Cycles   | E32 - Business Fractuations , Cycles   |
| E. Macroeconomics and                       | E4 - Money and Interest Rates  | E44 - Financial Markets and the Macroeconomy   |
| Monetary Economics  E. Macroeconomics and   | E6 - Macroeconomic Policy,   | E61 - Policy Objectives ; Policy Designs and   |
| <b>Monetary Economics</b>                   | Macroeconomic Aspects of<br>Public Finance, and General<br>Outlook                               | Consistency; Policy Coordination   |
| E. Macroeconomics and<br>Monetary Economics | E6 - Macroeconomic Policy,<br>Macroeconomic Aspects of<br>Public Finance, and General<br>Outlook | E62 - Fiscal Policy  |
| E. Macroeconomics and<br>Monetary Economics | E6 - Macroeconomic Policy,<br>Macroeconomic Aspects of<br>Public Finance, and General<br>Outlook | E65 - Studies of Particular Policy Episodes  |
| F. International Economics                  | F1 - Trade   | F15 - Economic Integration   |
| F. International Economics                  | F1 - Trade   | F16 - Trade and Labor Market Interactions  |
| F. International Economics                  | F1 - Trade   | F18 - Trade and Environment  |
| F. International Economics                  | F2 - International Factor<br>Movements and International<br>Business                             | F21 - International Investment ; Long-Term Capital Movements                                 |
| F. International Economics                  | F2 - International Factor<br>Movements and International<br>Business                             | F23 - Multinational Firms ; International Business   |
| F. International Economics                  | F3 - International Finance   | F34 - International Lending and Debt Problems  |
| F. International Economics                  | F3 - International Finance   | F36 - Financial Aspects of Economic Integration  |
| F. International Economics                  | F3 - International Finance   | F38 - International Financial Policy: Financial Transactions Tax; Capital Controls           |
| F. International Economics                  | F4 - Macroeconomic Aspects of<br>International Trade and Finance                                 | F43 - Economic Growth of Open Economies  |
| F. International Economics                  | F4 - Macroeconomic Aspects of International Trade and Finance                                    | F44 - International Business Cycles  |
| G. Financial Economics                      | G0 - General   | G00 - General  |



| Primary JEL category   | Secondary JEL subcategory                               | Tertiary JEL subcategory  |
|------------------------|---|---|
| G. Financial Economics | G0 - General  | G01 - Financial Crises  |
| G. Financial Economics | G1 - General Financial Markets                          | G10 - General   |
| G. Financial Economics | G1 - General Financial Markets                          | G11 - Portfolio Choice ; Investment Decisions   |
| G. Financial Economics | G1 - General Financial Markets                          | G12 - Asset Pricing; Trading Volume; Bond Interest Rates  |
| G. Financial Economics | G1 - General Financial Markets                          | G13 - Contingent Pricing; Futures Pricing   |
| G. Financial Economics | G1 - General Financial Markets                          | G14 - Information and Market Efficiency; Event Studies; Insider Trading   |
| G. Financial Economics | G1 - General Financial Markets                          | G15 - International Financial Markets   |
| G. Financial Economics | G1 - General Financial Markets                          | G17 - Financial Forecasting and Simulation  |
| G. Financial Economics | G1 - General Financial Markets                          | G18 - Government Policy and Regulation  |
| G. Financial Economics | G1 - General Financial Markets                          | G19 - Other   |
| G. Financial Economics | G2 - Financial Institutions and<br>Services             | G20 - General   |
| G. Financial Economics | G2 - Financial Institutions and Services                | G21 - Banks ; Depository Institutions ; Micro Finance Institutions ; Mortgages  |
| G. Financial Economics | G2 - Financial Institutions and Services                | G22 - Insurance ; Insurance Companies ; Actuarial Studies   |
| G. Financial Economics | G2 - Financial Institutions and Services                | G23 - Non-bank Financial Institutions ; Financial Instruments ; Institutional Investors   |
| G. Financial Economics | G2 - Financial Institutions and<br>Services             | G24 - Investment Banking ; Venture Capital ;<br>Brokerage ; Ratings and Ratings Agencies  |
| G. Financial Economics | G2 - Financial Institutions and Services                | G28 - Government Policy and Regulation  |
| G. Financial Economics | G2 - Financial Institutions and<br>Services             | G29 - Other   |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G30 - General   |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G31 - Capital Budgeting ; Fixed Investment and Inventory Studies ; Capacity   |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G32 - Financing Policy; Financial Risk and Risk<br>Management; Capital and Ownership Structure;<br>Value of Firms; Goodwill     |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G33 - Bankruptcy ; Liquidation  |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G34 - Mergers ; Acquisitions ; Restructuring ;<br>Corporate Governance  |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G35 - Payout Policy   |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G38 - Government Policy and Regulation  |
| G. Financial Economics | G3 - Corporate Finance and Governance                   | G39 - Other   |
| G. Financial Economics | G4 - Behavioral Finance                                 | G41 - Role and Effects of Psychological, Emotional,<br>Social, and Cognitive Factors on Decision Making in<br>Financial Markets |
| H. Public Economics    | H2 - Taxation, Subsidies, and<br>Revenue                | H23 - Externalities ; Redistributive Effects ;<br>Environmental Taxes and Subsidies   |
| H. Public Economics    | H2 - Taxation, Subsidies, and<br>Revenue                | H25 - Business Taxes and Subsidies  |
| H. Public Economics    | H3 - Fiscal Policies and<br>Behavior of Economic Agents | H32 - Firm  |
| H. Public Economics    | H4 - Publicly Provided Goods                            | H40 - General   |
| H. Public Economics    | H4 - Publicly Provided Goods                            | H41 - Public Goods  |
| H. Public Economics    | H4 - Publicly Provided Goods                            | H42 - Publicly Provided Private Goods   |
| H. Public Economics    | H4 - Publicly Provided Goods                            | H43 - Project Evaluation ; Social Discount Rate   |
| H. Public Economics    | H4 - Publicly Provided Goods                            | H44 - Publicly Provided Goods: Mixed Markets  |



| Primary JEL category                  | Secondary JEL subcategory  | Tertiary JEL subcategory  |
|---------------------------------------|--|---|
| H. Public Economics                   | H4 - Publicly Provided Goods                                     | H49 - Other   |
| H. Public Economics                   | H5 - National Government<br>Expenditures and Related<br>Policies | H52 - Government Expenditures and Education                                 |
| H. Public Economics                   | H5 - National Government<br>Expenditures and Related<br>Policies | H53 - Government Expenditures and Welfare Programs                          |
| H. Public Economics                   | H5 - National Government<br>Expenditures and Related<br>Policies | H54 - Infrastructures ; Other Public Investment and Capital Stock           |
| H. Public Economics                   | H8 - Miscellaneous Issues  | H81 - Governmental Loans ; Loan Guarantees ;<br>Credits ; Grants ; Bailouts |
| H. Public Economics                   | H8 - Miscellaneous Issues  | H83 - Public Administration ; Public Sector<br>Accounting and Audits        |
| H. Public Economics                   | H8 - Miscellaneous Issues  | H87 - International Fiscal Issues ; International Public Goods              |
| I. Health, Education, and Welfare     | I2 - Education and Research Institutions                         | I22 - Educational Finance ; Financial Aid                                   |
| I. Health, Education, and<br>Welfare  | I2 - Education and Research<br>Institutions                      | I25 - Education and Economic Development                                    |
| I. Health, Education, and Welfare     | I2 - Education and Research Institutions                         | I26 - Returns to Education  |
| I. Health, Education, and<br>Welfare  | I2 - Education and Research<br>Institutions                      | I28 - Government Policy   |
| I. Health, Education, and<br>Welfare  | I3 - Welfare, Well-Being, and Poverty                            | I38 - Government Policy ; Provision and Effects of Welfare Programs         |
| J. Labor and Demographic<br>Economics | J0 - General   | J08 - Labor Economics Policies  |
| J. Labor and Demographic<br>Economics | J2 - Demand and Supply of<br>Labor                               | J21 - Labor Force and Employment, Size, and<br>Structure                    |
| J. Labor and Demographic<br>Economics | J2 - Demand and Supply of<br>Labor                               | J22 - Time Allocation and Labor Supply                                      |
| J. Labor and Demographic<br>Economics | J2 - Demand and Supply of<br>Labor                               | J23 - Labor Demand  |
| J. Labor and Demographic<br>Economics | J2 - Demand and Supply of<br>Labor                               | J24 - Human Capital; Skills; Occupational Choice;<br>Labor Productivity     |
| J. Labor and Demographic<br>Economics | J2 - Demand and Supply of<br>Labor                               | J28 - Safety ; Job Satisfaction ; Related Public Policy                     |
| J. Labor and Demographic<br>Economics | J3 - Wages, Compensation, and<br>Labor Costs                     | J31 - Wage Level and Structure ; Wage Differentials                         |
| J. Labor and Demographic<br>Economics | J3 - Wages, Compensation, and<br>Labor Costs                     | J33 - Compensation Packages ; Payment Methods                               |
| J. Labor and Demographic<br>Economics | J3 - Wages, Compensation, and<br>Labor Costs                     | J38 - Public Policy   |
| K. Law and Economics                  | K2 - Regulation and Business<br>Law                              | K21 - Antitrust Law   |
| K. Law and Economics                  | K2 - Regulation and Business<br>Law                              | K22 - Business and Securities Law   |
| K. Law and Economics                  | K2 - Regulation and Business<br>Law                              | K23 - Regulated Industries and Administrative Law                           |
| K. Law and Economics                  | K2 - Regulation and Business<br>Law                              | K24 - Cyber Law   |
| K. Law and Economics                  | K3 - Other Substantive Areas of<br>Law                           | K31 - Labor Law   |
| K. Law and Economics                  | K3 - Other Substantive Areas of<br>Law                           | K32 - Energy, Environmental, Health, and Safety Law                         |
| K. Law and Economics                  | K3 - Other Substantive Areas of<br>Law                           | K33 - International Law   |
| K. Law and Economics                  | K3 - Other Substantive Areas of<br>Law                           | K34 - Tax Law   |
| L. Industrial Organization            | L0 - General   | L00 - General   |



| Primary JEL category       | Secondary JEL subcategory  | Tertiary JEL subcategory   |
|----------------------------|--|--|
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L10 - General  |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L11 - Production, Pricing, and Market Structure; Size Distribution of Firms  |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L12 - Monopoly ; Monopolization Strategies   |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L13 - Oligopoly and Other Imperfect Markets  |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L14 - Transactional Relationships ; Contracts and Reputation ; Networks  |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L15 - Information and Product Quality;<br>Standardization and Compatibility  |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L16 - Industrial Organization and Macroeconomics:<br>Industrial Structure and Structural Change; Industrial<br>Price Indices |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L17 - Open Source Products and Markets   |
| L. Industrial Organization | L1 - Market Structure, Firm<br>Strategy, and Market<br>Performance | L19 - Other  |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L20 - General  |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L21 - Business Objectives of the Firm  |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L22 - Firm Organization and Market Structure   |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L23 - Organization of Production   |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L24 - Contracting Out ; Joint Ventures ; Technology<br>Licensing   |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L25 - Firm Performance: Size, Diversification, and Scope   |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L26 - Entrepreneurship   |
| L. Industrial Organization | L2 - Firm Objectives,<br>Organization, and Behavior                | L29 - Other  |
| L. Industrial Organization | L3 - Nonprofit Organizations<br>and Public Enterprise              | L30 - General  |
| L. Industrial Organization | L3 - Nonprofit Organizations<br>and Public Enterprise              | L31 - Nonprofit Institutions ; NGOs ; Social Entrepreneurship  |
| L. Industrial Organization | L3 - Nonprofit Organizations<br>and Public Enterprise              | L32 - Public Enterprises ; Public-Private Enterprises  |
| L. Industrial Organization | L3 - Nonprofit Organizations<br>and Public Enterprise              | L33 - Comparison of Public and Private Enterprises and Nonprofit Institutions; Privatization; Contracting Out                |
| L. Industrial Organization | L3 - Nonprofit Organizations and Public Enterprise                 | L38 - Public Policy  |
| L. Industrial Organization | L3 - Nonprofit Organizations and Public Enterprise                 | L39 - Other  |
| L. Industrial Organization | L4 - Antitrust Issues and Policies                                 | L40 - General  |
| L. Industrial Organization | L4 - Antitrust Issues and Policies                                 | L41 - Monopolization ; Horizontal Anticompetitive Practices  |
| L. Industrial Organization | L4 - Antitrust Issues and<br>Policies                              | L42 - Vertical Restraints; Resale Price Maintenance; Quantity Discounts  |
| L. Industrial Organization | L4 - Antitrust Issues and<br>Policies                              | L43 - Legal Monopolies and Regulation or<br>Deregulation   |



| Primary JEL category                               | Secondary JEL subcategory                | Tertiary JEL subcategory   |
|--|--|--|
| L. Industrial Organization                         | L4 - Antitrust Issues and                | L44 - Antitrust Policy and Public Enterprises,                     |
| L. Industrial Organization                         | Policies L4 - Antitrust Issues and       | Nonprofit Institutions, and Professional Organizations L49 - Other |
| L. Industriai Organization                         | Policies                                 | E-17 Other   |
| L. Industrial Organization                         | L5 - Regulation and Industrial Policy    | L50 - General  |
| L. Industrial Organization                         | L5 - Regulation and Industrial<br>Policy | L51 - Economics of Regulation                                      |
| L. Industrial Organization                         | L5 - Regulation and Industrial Policy    | L52 - Industrial Policy ; Sectoral Planning Methods                |
| L. Industrial Organization                         | L5 - Regulation and Industrial<br>Policy | L53 - Enterprise Policy  |
| L. Industrial Organization                         | L5 - Regulation and Industrial Policy    | L59 - Other  |
| M. Business Administration and Business Economics; | M0 - General                             | M00 - General  |
| Marketing; Accounting; Personnel Economics         |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M10 - General  |
| Business Economics;                                |  |  |
| Marketing ; Accounting ;<br>Personnel Economics    |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M11 - Production Management  |
| Business Economics; Marketing; Accounting;         |  |  |
| Personnel Economics                                |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M12 - Personnel Management ; Executives; Executive                 |
| Business Economics ; Marketing ; Accounting ;      |  | Compensation   |
| Personnel Economics                                |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M13 - New Firms ; Startups   |
| Business Economics ; Marketing ; Accounting ;      |  |  |
| Personnel Economics                                |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M14 - Corporate Culture ; Diversity ; Social                       |
| Business Economics ;                               |  | Responsibility   |
| Marketing ; Accounting ;<br>Personnel Economics    |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M15 - IT Management  |
| <b>Business Economics</b> ;                        |  | ·  |
| Marketing ; Accounting ;<br>Personnel Economics    |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M16 - International Business Administration                        |
| Business Economics ;                               |  |  |
| Marketing ; Accounting ;<br>Personnel Economics    |  |  |
| M. Business Administration and                     | M1 - Business Administration             | M19 - Other  |
| <b>Business Economics</b> ;                        |  |  |
| Marketing ; Accounting ;<br>Personnel Economics    |  |  |
| M. Business Administration and                     | M2 - Business Economics                  | M20 - General  |
| <b>Business Economics</b> ;                        |  |  |
| Marketing; Accounting;                             |  |  |
| Personnel Economics M. Business Administration and | M2 - Business Economics                  | M21 - Business Economics   |
| Business Economics ;                               | 2.2 2 domest Decironnes                  | Business Zeonomies   |
| Marketing; Accounting;                             |  |  |
| Personnel Economics M. Business Administration and | M2 - Business Economics                  | M29 - Other  |
| Business Economics ;                               | 1112 - Dusiness Economics                | M2) Julei  |
| Marketing; Accounting;                             |  |  |
| Personnel Economics M. Business Administration and | M2 Montrating 1 A Jt' '                  | M20 Camaral  |
| M. Business Administration and Business Economics; | M3 - Marketing and Advertising           | M30 - General  |
|  |  |  |



| Primary JEL category                                  | Secondary JEL subcategory  | Tertiary JEL subcategory   |
|---|--|--|
| Marketing; Accounting;                                |  |  |
| Personnel Economics M. Business Administration and    | M3 - Marketing and Advertising   | M31 - Marketing  |
| Business Economics ;                                  | Wi3 - Warketing and Advertising  | Wist - Warketing   |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M3 - Marketing and Advertising   | M37 - Advertising  |
| Business Economics ;                                  |  |  |
| Marketing ; Accounting ;<br>Personnel Economics       |  |  |
| M. Business Administration and                        | M3 - Marketing and Advertising   | M38 - Government Policy and Regulation   |
| <b>Business Economics ;</b>                           |  | , ,  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   | M2 Montrating and Advantising  | M20 Othor  |
| M. Business Administration and Business Economics;    | M3 - Marketing and Advertising   | M39 - Other  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M4 - Accounting and Auditing   | M40 - General  |
| Business Economics ;                                  |  |  |
| Marketing ; Accounting ;<br>Personnel Economics       |  |  |
| M. Business Administration and                        | M4 - Accounting and Auditing   | M41 - Accounting   |
| Business Economics;                                   | The state and st | The first outside the second of the second of the second outside the s |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M4 - Accounting and Auditing   | M42 - Auditing   |
| Business Economics; Marketing; Accounting;            |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M4 - Accounting and Auditing   | M48 - Government Policy and Regulation   |
| <b>Business Economics</b> ;                           |  |  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics M. Business Administration and    | M4 - Accounting and Auditing   | M49 - Other  |
| Business Economics ;                                  | W4 - Accounting and Additing   | Wi4) - Other   |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M5 - Personnel Economics   | M50 - General  |
| Business Economics; Marketing; Accounting;            |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M5 - Personnel Economics   | M51 - Firm Employment Decisions; Promotions  |
| <b>Business Economics</b> ;                           |  |  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics M. Business Administration and    | M5 - Personnel Economics   | M52 - Compensation and Compensation Methods and  |
| Business Economics ;                                  | 1.15 Tersonner Leononnes   | Their Effects  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M5 - Personnel Economics   | M53 - Training   |
| Business Economics; Marketing; Accounting;            |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M5 - Personnel Economics   | M54 - Labor Management   |
| <b>Business Economics</b> ;                           |  |  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics  M. Business Administration and   | M5 - Personnel Economics   | M55 Labor Contracting Devices  |
| M. Business Administration and<br>Business Economics; | WIS - Personner Economics  | M55 - Labor Contracting Devices  |
| Marketing; Accounting;                                |  |  |
| Personnel Economics                                   |  |  |
| M. Business Administration and                        | M5 - Personnel Economics   | M59 - Other  |
| <b>Business Economics</b> ;                           |  |  |



| Primary JEL category  | Secondary JEL subcategory  | Tertiary JEL subcategory  |
|---|--|---|
| Marketing; Accounting;  |  |   |
| Personnel Economics O. Economic Development,  | O1 - Economic Development  | O10 - General   |
| Innovation, Technological   |  |   |
| Change, and Growth O. Economic Development,   | O1 - Economic Development  | O11 - Macroeconomic Analyses of Economic  |
| Innovation, Technological   | O1 - Leononne Development  | Development Development   |
| Change, and Growth  | 01 E   | 010 M   |
| O. Economic Development,<br>Innovation, Technological   | O1 - Economic Development  | O12 - Microeconomic Analyses of Economic Development  |
| Change, and Growth  |  | -   |
| O. Economic Development,  | O1 - Economic Development  | O13 - Agriculture ; Natural Resources ; Energy ;<br>Environment ; Other Primary Products  |
| Innovation, Technological<br>Change, and Growth   |  | Environment, Other Finnary Froducts   |
| O. Economic Development,  | O1 - Economic Development  | O14 - Industrialization; Manufacturing and Service  |
| Innovation, Technological<br>Change, and Growth   |  | Industries ; Choice of Technology   |
| O. Economic Development,  | O1 - Economic Development  | O15 - Human Resources; Human Development;   |
| Innovation, Technological<br>Change, and Growth   |  | Income Distribution; Migration  |
| O. Economic Development,  | O1 - Economic Development  | O16 - Financial Markets; Saving and Capital   |
| Innovation, Technological   | _  | Investment; Corporate Finance and Governance  |
| Change, and Growth O. Economic Development,   | O1 - Economic Development  | O17 - Formal and Informal Sectors ; Shadow  |
| Innovation, Technological   | or Beaucine Beverapinent   | Economy; Institutional Arrangements   |
| Change, and Growth O. Economic Development,   | O1 - Economic Development  | O18 - Urban, Rural, Regional, and Transportation  |
| Innovation, Technological   | O1 - Economic Development  | Analysis; Housing; Infrastructure   |
| Change, and Growth  | 01 5   |   |
| O. Economic Development,<br>Innovation, Technological   | O1 - Economic Development  | O19 - International Linkages to Development; Role of International Organizations  |
| Change, and Growth  |  | and management  |
| O. Economic Development,<br>Innovation, Technological   | O2 - Development Planning and Policy   | O21 - Planning Models ; Planning Policy   |
| Change, and Growth  | Toney  |   |
| O. Economic Development,  | O2 - Development Planning and  | O25 - Industrial Policy   |
| Innovation, Technological<br>Change, and Growth   | Policy   |   |
| O. Economic Development,  | O3 - Innovation ; Research and   | O30 - General   |
|   |  |   |
|   | Rights   |   |
| O. Economic Development,  |  |   |
| Change, and Growth  | Change; Intellectual Property  | nicentives  |
|   | Rights   | 022 14  |
|   |  |   |
| Change, and Growth  | Change; Intellectual Property  |   |
| O Feanamie Davolanment  | Rights O3 - Innovation : Research and  | 033 - Technological Change: Choices and   |
| Innovation, Technological   | Development ; Technological  | Consequences; Diffusion Processes   |
| Change, and Growth  | Change; Intellectual Property  |   |
| O. Economic Development.  |  | O34 - Intellectual Property and Intellectual Capital  |
| Innovation, Technological   | Development ; Technological  | , , , , , , , , , , , , , , , , , , ,   |
| Change, and Growth  |  |   |
| O. Economic Development,  | O3 - Innovation ; Research and   | O35 - Social Innovation   |
| Innovation, Technological   | Development; Technological   |   |
| Change, and Growth  | Rights Rights  |   |
| Innovation, Technological Change, and Growth  O. Economic Development, Innovation, Technological Change, and Growth | Development; Technological Change; Intellectual Property Rights O3 - Innovation; Research and Development; Technological Change; Intellectual Property Rights O3 - Innovation; Research and Development; Technological Change; Intellectual Property Rights O3 - Innovation; Research and Development; Technological Change; Intellectual Property Rights O3 - Innovation; Research and Development; Technological Change; Intellectual Property Rights O3 - Innovation; Research and Development; Technological Change; Intellectual Property Rights O3 - Innovation; Research and Development; Technological Change; Intellectual Property | O31 - Innovation and Invention: Processes and Incentives  O32 - Management of Technological Innovation and R&D  O33 - Technological Change: Choices and Consequences; Diffusion Processes  O34 - Intellectual Property and Intellectual Capital |



| Primary JEL category   | Secondary JEL subcategory   | Tertiary JEL subcategory   |
|--|---|--|
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O3 - Innovation ; Research and<br>Development ; Technological<br>Change ; Intellectual Property<br>Rights | O36 - Open Innovation  |
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O3 - Innovation; Research and<br>Development; Technological<br>Change; Intellectual Property<br>Rights    | O38 - Government Policy  |
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O3 - Innovation; Research and<br>Development; Technological<br>Change; Intellectual Property<br>Rights    | O39 - Other  |
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O4 - Economic Growth and<br>Aggregate Productivity  | O43 - Institutions and Growth  |
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O4 - Economic Growth and Aggregate Productivity   | O44 - Environment and Growth   |
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O4 - Economic Growth and<br>Aggregate Productivity  | O47 - Empirical Studies of Economic Growth; Aggregate Productivity; Cross-Country Output Convergence |
| O. Economic Development,<br>Innovation, Technological<br>Change, and Growth                      | O5 - Economywide Country<br>Studies   | O52 - Europe   |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q0 - General  | Q01 - Sustainable Development  |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q1 - Agriculture  | Q14 - Agricultural Finance   |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q1 - Agriculture  | Q16 - R&D ; Agricultural Technology ; Biofuels ; Agricultural Extension Services                     |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q2 - Renewable Resources and<br>Conservation  | Q28 - Government Policy  |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q3 - Nonrenewable Resources<br>and Conservation   | Q38 - Government Policy  |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q4 - Energy   | Q48 - Government Policy  |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q5 - Environmental Economics  | Q50 - General  |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics  | Q51 - Valuation of Environmental Effects   |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics  | Q52 - Pollution Control Adoption and Costs;<br>Distributional Effects; Employment Effects            |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics  | Q53 - Air Pollution ; Water Pollution ; Noise ;<br>Hazardous Waste ; Solid Waste ; Recycling         |



| Primary JEL category   | Secondary JEL subcategory  | Tertiary JEL subcategory   |
|--|--|--|
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics   | Q54 - Climate ; Natural Disasters and Their<br>Management ; Global Warming   |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics   | Q55 - Technological Innovation   |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q5 - Environmental Economics   | Q56 - Environment and Development; Environment and Trade; Sustainability; Environmental Accounts and Accounting; Environmental Equity; Population Growth |
| Q. Agricultural and Natural<br>Resource Economics ;<br>Environmental and Ecological<br>Economics | Q5 - Environmental Economics   | Q57 - Ecological Economics: Ecosystem Services;<br>Biodiversity Conservation; Bioeconomics; Industrial<br>Ecology  |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics   | Q58 - Government Policy  |
| Q. Agricultural and Natural<br>Resource Economics;<br>Environmental and Ecological<br>Economics  | Q5 - Environmental Economics   | Q59 - Other  |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R1 - General Regional<br>Economics   | R11 - Regional Economic Activity: Growth,<br>Development, Environmental Issues, and Changes  |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R1 - General Regional<br>Economics   | R12 - Size and Spatial Distributions of Regional<br>Economic Activity  |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R1 - General Regional<br>Economics   | R15 - Econometric and Input-Output Models ; Other Models   |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R3 - Real Estate Markets,<br>Spatial Production Analysis, and<br>Firm Location | R33 - Nonagricultural and Nonresidential Real Estate<br>Markets  |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R3 - Real Estate Markets,<br>Spatial Production Analysis, and<br>Firm Location | R38 - Government Policy  |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R5 - Regional Government<br>Analysis   | R51 - Finance in Urban and Rural Economies   |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R5 - Regional Government<br>Analysis   | R53 - Public Facility Location Analysis; Public Investment and Capital Stock   |
| R. Urban, Rural, Regional, Real<br>Estate, and Transportation<br>Economics                       | R5 - Regional Government<br>Analysis   | R58 - Regional Development Planning and Policy   |



### Appendix C – Confidentiality undertaking and terms of use

#### Confidentiality undertaking and terms of use

These Guidelines contemplate the possibility to give access to confidential data for scientific purposes to researchers in the interest of scientific progress in Europe, subject to the strict obligation to respect the confidentiality of the data.

This undertaking, therefore, specifies the conditions for access to confidential statistical data for scientific purposes, the obligations of the researchers, measures for preserving the confidentiality of statistical data and sanctions in the event of breach of these obligations.

This undertaking must be signed by a duly designated representative of the research entity and constitutes the explicit acknowledgement by that entity of the conditions and obligations to which the undertaking refers.

The duly designated representative must immediately inform the European Investment Fund (EIF) of any changes to the information provided in the confidentiality undertaking.



### **Identification form**

| 1. Ent       | tity  |
|--------------|---|
|              | Official full name of the entity:                   |
|              | Short name — acronym:                               |
|              | English name:                                       |
|              | Postal address:                                     |
|              | Web address:  |
|              |   |
| <b>2.</b> Du | ly designated representative of the research entity |
|              | Name:   |
|              | Organisation:                                       |
|              | Division/Faculty:                                   |
|              | Position:   |
|              | Telephone:  |
|              | Email:  |
|              | Postal address:                                     |
|              |   |
| 3. Co        | ntact person  |
|              | Name:   |
|              | Organisation:                                       |
|              | Division/Faculty:                                   |
|              | Position:   |
|              | Telephone:  |
|              | Email:  |
|              | Postal address:                                     |

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#### CONFIDENTIALITY UNDERTAKING REGARDING ACCESS TO EIF MICRODATA

| WHEREAS:   |  |  |
|--|--|--|
| (A) Access to EIF Microdata referred to in these Guidelines requires the express issuance of a confidentiality undertaking (hereinafter the "Undertaking") covering all researchers of the entity who will have access to confidential data. The mentioned Undertaking shall specify the conditions for access, the obligations of the researchers, the measures for preserving the confidentiality of statistical data and the sanctions in the event of a breach of these obligations. |  |  |
| (B) The Undertaking must be signed by a duly designated representative of the research entity,   |  |  |
|  |  |  |
|  |  |  |
| (Name of the entity)   |  |  |
|  |  |  |
| represented by its duly designated representative:   |  |  |
| (Name of the duly decignated representative)   |  |  |
| (Name of the duly designated representative)   |  |  |

HEREBY UNDERTAKES to ensure that the researchers within this entity who require access to confidential data for scientific purposes at Union level:

- (1) will, prior to such access, submit to the EIF a research proposal in accordance with the predefined standards and countersigned by the contact person, which will be assessed by the EIF;
- (2) will not have access to confidential data before the research proposal is recognised as appropriate by the EIF;
- (3) will use the confidential data for scientific purposes in accordance with the terms of use attached to this Undertaking, and will in particular:
  - (a) use the confidential data for scientific purposes only for the statistical analyses specified in the research proposal submitted for assessment;
  - (b) ensure that none of the data will be accessed by non-authorised persons or parties;
  - (c) not attempt to identify particular persons or organisations to which the data relates and will not disclose, either directly or indirectly, the information to any other person or organisation;
- (4) may be subject to disciplinary sanctions in the event of breach of the confidentiality rules laid down in this Undertaking or in the terms of use of confidential data for scientific purposes attached hereto.



| The EIF shall, upon its request, receive all information necessary to verify the observance of the terms of use attached to this Undertaking, failing which all access to confidential data for scientific purposes will be withdrawn. |
|--|
| In signing this Undertaking, I, as the duly designated representative of, understand that:   |
| - any breach of the conditions stated herein or in the terms of use attached to this Undertaking may result in withdrawal of service for the entity and/or individuals and/or legal action against the entity;                         |
| - any deliberate attempt to compromise the confidentiality of persons or organisations to which the confidential data for scientific purposes relate may result in prosecution in accordance with the applicable national law.         |
| I will inform the EIF immediately about any breach of the confidentiality rules laid down in this Undertaking or in the terms of use of confidential data for scientific purposes attached hereto.                                     |
|  |
| Signature:   |
| Done at (state location)   |
| Date:  |



#### Terms of use of EIF confidential microdata for scientific purposes

#### **General principles**

Access to confidential data for scientific purposes will only be granted if all the conditions laid down in these Guidelines are fulfilled, in particular:

- access will be granted only to researchers belonging to a recognised research entity;
- the research entity's duly designated representative must have signed a confidentiality undertaking;
- access may be granted only if the research proposal submitted by the researchers asking for access to confidential data for scientific purposes has been approved; each research proposal must be countersigned by the contact person identified in the confidentiality undertaking;
- all researchers asking for access to confidential data for scientific purposes must have signed a confidentiality declaration.

The research entity's duly designated representative shall take all the necessary regulatory, administrative, technical and organisational measures to ensure that access to confidential data for scientific purposes is organised in accordance with the present terms of use.

#### Liability

In case of violation of the conditions for access to confidential data for scientific purposes, this access may be withdrawn from the research entity and/or from the researcher. The research entity may also be liable to pay compensation for damages and/or asked to take disciplinary action against the offending researcher.

The Undertaking and the terms of use do not limit the liability of the research entity or the researcher for contraventions of any requirements laid down in the applicable national civil or penal law.

EIF and the Commission may not be held responsible for any errors, omissions or mistakes contained in data made available to the research entity or to the researcher nor for any consequences or liabilities arising therefrom. Nor shall they be responsible for any effects of the materials supplied on software or hardware of computer systems of the research entity or of the researcher.

#### **Data users**

The data shall be made available to the researchers named in the research proposal.

#### Safekeeping of the data

The confidential data for scientific purposes must be stored on a password-protected computer. Access to the data must be restricted to authorised researchers named in the research proposal.

The intermediate results of analysis containing confidential data must be stored in a protected environment. The confidential data for scientific purposes must be solely used on the premises of the research entity.

#### **Data handling**

Researchers must ensure that any results of the research published or otherwise disseminated do not contain information that allow individual statistical units (persons, households, enterprises, etc.) to be identified neither directly nor indirectly.

In all reports, including both published and unpublished papers, researchers must ensure the strict application of the guidelines for publication attached to the confidential data for scientific purposes. No copy of all or part of the data may be made and none of the data may leave the research entity's premises.

#### **Duration of access**



Access to confidential data may be granted only for the period stated in the research proposal (duration of the research project).

Any extension of access must be requested separately before the scheduled end-date of the research project stated in the research proposal. No compensation may be claimed in the event of such an extension not being approved.

The EIF may immediately terminate access to data if the research entity has not fully ensured compliance with the conditions and obligations referred to in the confidentiality undertaking and these terms of use. In the event of non-compliance, the EIF shall in writing request the research entity to rectify the situation within a period not exceeding one month. In the absence of rectification, termination shall be effective on the date the entity receives a registered letter with acknowledgement of receipt.

#### After expiry or completion of the project

After expiry or completion of the project indicated in the research proposal (or in the event of termination of access by the EIF), the principal researcher must destroy the dataset and any data or variables derived from it and sign a declaration to the effect that it has been ensured that all data have been destroyed. This obligation applies to the original data sent by the EIF and to all derived data, except for the aggregated and/or analysed data as presented in the research results/reports.

The research entity is required to provide the EIF with references to all reports that have been produced using the data. To allow a central list of all data recipients and analyses to be continuously updated, these references shall be given to the EIF as soon as possible with any necessary qualifiers (e.g. 'not to be quoted'). In any event, these references must be sent to the microdata access team immediately after the reports have been presented or published. The research entity will remain bound by this obligation even after finalisation of the research project or termination of the access to data.

The researchers must not make further use of the information made available to them by the EIF after the completion of the research project or termination of the access to data. Failure to comply with this requirement shall result in liability to claims for damages and to penalties.

Furthermore, at the request of the EIF, the research entity must return or destroy all documents and computer records relating to the work performed in relation to the research proposals.

#### **Identification of data sources**

The researchers shall state the source of the data by referring to: "This study/report/paper is based on data from the EIF' and add the following disclaimer when disseminating the results of work to which the research proposal relates: 'The responsibility for all conclusions drawn from the data lies entirely with the author(s)'.

#### **Resolution of disputes**

In the event of a dispute or claim concerning the processing of the confidential data for scientific purposes, the research entity shall cooperate with a view to settling them amicably in a timely fashion.

The research entity shall respond to any generally available non-binding mediation. The research entity should consider participating in any other arbitration, mediation or other dispute resolution proceedings developed for data protection disputes.

#### Applicable law

The implementation of these terms of use shall be governed by Luxembourg law; the courts in Luxembourg shall have sole jurisdiction to hear any disputes.



#### INDIVIDUAL CONFIDENTIALITY DECLARATION

(to be signed by all persons named in the research proposal)

I will be bound by all the terms and conditions of the confidentiality undertaking signed by the duly designated representative of my research entity and will use the dataset indicated in the research proposal in accordance with the terms of use attached to the confidentiality undertaking.

#### I will:

- (a) use the dataset only for the purposes specified in the research proposal;
- (b) safeguard the dataset and any usernames and passwords associated with it;
- (c) ensure that any results of analyses will not be disclosive or potentially disclosive in conjunction with other publicly available information;
- (d) acknowledge the dataset and its source in any research report or publication and also state that the results and conclusions are mine and not those of the EIF;
- (e) provide the EIF with references to publications and other research reports based on this dataset;
- (f) preserve the confidentiality of information pertaining to identifiable individuals, companies and/or organisations that are recorded in the dataset;
- (g) submit the final complete output of my work for the confidentiality check to the competent EIF staff (in case of access to secure use files);
- (h) destroy the dataset and any data or variables derived from it at the end of the research period specified in the research proposal and sign a declaration to the effect that it has been ensured that all data have been destroyed;
- (i) abide by any other conditions notified to me by the EIF (e.g. guidelines for publication);
- (j) inform the EIF immediately about any breach of the confidentiality rules laid down in the confidentiality undertaking or in the terms of use of confidential data for scientific purposes.

#### I will not:

- (a) use the data (scientific use files) outside the premises of my research entity;
- (b) allow non-authorised users to access the dataset (authorised users are named in the research proposal);
- (c) use the data for research purposes before it is checked for confidentiality by the EIF (in case of access to secure use files)
- (d) remove the data or any part of it (in case of access to secure use files);
- (e) attempt to link the data to other (including public) datasets, whether or not provided by the EIF, if not expressly agreed;
- (f) attempt to identify any individual record (individual, business, etc.) in the dataset, or claim to have done so;
- (g) release or publish any information or results which identify or allow to identify any individual record or may lead to the identification of any individual record.

I certify that I have read all of the above clauses, that I understand that I am accountable for correct and responsible use of the data and data access system, and that I understand that if I fail to comply with these clauses, my access to the dataset will be withdrawn and I will be liable to any other sanctions that may be determined by my research entity or are specified in the applicable civil or penal law.

| Name: | Signature: | Date: |
|-------|------------|-------|
|       |            |       |



### Appendix D – Research proposal application form

## RESEARCH PROPOSAL APPLICATION FORM

ALL FIELDS IN THE APPLICATION FORM ARE COMPULSORY – PROCESSING OF APPLICATION FORMS NOT DULY COMPLETED MAY BE DELAYED

| Research entity identification number:  |  |  |
|---|--|--|
| Name of the contact person in the research entity:  |  |  |
| In case of a network contract (more than one research entity participating in the project): |  |  |
| Other research entity(ies) identification number(s):  |  |  |
| Name(s) of the contact person(s) in the other research entity(ies):                         |  |  |
| 1. Identification of the researchers (and data manager) who will have access to the data    |  |  |
| 1.1 Principal researcher:   |  |  |
| Name:   |  |  |
| Position:   |  |  |
| Telephone:  |  |  |
| E-mail:   |  |  |
| Official full name of the research entity:  |  |  |
| English name:   |  |  |
| Address:  |  |  |
| Web address:  |  |  |
|   |  |  |



E-mail:

Official full name of the research entity:

| ${\bf 1.2~Data~manager~-~the~person~to~whom~confidential~data~will~be~sent~-~\underline{if~different~from~principal}} \\ \underline{researcher}$ |
|--|
| Name:  |
| Position:  |
| Telephone:   |
| E-mail:  |
| Official full name of the research entity:   |
| English name:  |
| Address  |
| Web address:   |
| 1.3 Individual researchers   |
| Individual researcher (1)  |
| Name:  |
| Position:  |
| Telephone:   |
| E-mail:  |
| Official full name of the research entity:   |
| Individual researcher (2)  |
| Name:  |
| Position:  |
| Telephone:   |
| E-mail:  |
| Official full name of the research entity:   |
| Individual researcher (3)  |
| Name:  |
| Position:  |
| Telephone:   |



### 2. Purpose of the research proposal

In case of an application for several projects, for which multiple datasets are needed, please send one research proposal application form per project.

| proposal application form per project.   |
|--|
| 2.1 Title(s) of the research proposal(s):  |
|  |
| 2.2 Please describe the research project(s) for which access to confidential data is requested, objectives of the research project(s) and provide details on the underlying contract if the research project is commissioned by another body; maximum 2 pages. |
| 2.3 Please explain why the purpose of the research cannot be fulfilled using publicly available (non-confidential) data.   |
| 2.4. Please state the duration for which access to confidential data is requested (maximum five years), please respect the format: dd/mm/yyyy.   |
| From:  |
| To:  |
|  |
| 3. Datasets to be used   |
| 3.1 Please describe which variable groups, reference years and target population will be used.   |
| 3.2 Please state how the above-mentioned dataset will be used.   |
| 3.3 Please state the methods of statistical analysis to be used.   |
| 4. Results of the statistical analysis   |

4.1 Please describe the expected outcomes of the statistical analysis of the data.



4.2 Please describe how the results of the research will be published or otherwise disseminated: through which channels (printed publications, online publications, conferences, web, etc.)

I hereby certify that the information contained in this questionnaire is complete, accurate and correct and that any future change will be reported immediately to the EIF. I understand that the EIF is authorised to check at any time the accuracy of the information given in this questionnaire. I understand that the EIF may also request more information, if necessary.

I confirm that I submit this request in order to be granted access to confidential data for scientific purposes. The decision of the EIF providing the data may or may not authorise me to be granted access to confidential data for scientific purposes.

Furthermore, I commit myself to take and maintain all necessary measures in compliance with the requirements stated in the confidentiality declaration.

| Principal researcher:  |
|--|
| Name:  |
| At: (please state location)  |
| Date:  |
| Signature:   |
|  |
| Contact person in the research entity:   |
| The contact person confirms by his/her signature that all persons quoted in the research project proposal are employed by, or formally related to, the research entity. The contact person shall inform researchers named in the research proposal about the obligations described in the terms of use of confidential data. |
| Name:  |
| At: (please state location)  |
| Date:  |
| Signature:   |