

# Poland - Entrepreneurial Discovery Process Project 2014, Firm Interviews

Ministry of Economic Development, Poland, World Bank

Report generated on: August 23, 2016

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# Sampling

# Sampling Procedure

The sampling frame is defined as all enterprises belonging to the 10 smart specialization areas selected by the Ministry of Economic Development as key priorities for Poland's innovation policy. The key challenge related to the sampling criteria is that definitions of the smart specializations are rather generic; thus it is not possible to precisely describe the composition of the population to which the survey applies. Furthermore, even if some assumptions are made to determine eligibility, there are no preexisting public sources containing listings of innovative firms. As a result, the survey adopts a quota sampling method, which is a non-random sampling approach. That is, units are selected into a sample on the basis of pre-specified characteristics so that the total sample has the same distribution of characteristics assumed to exist in the population being studied.

The survey sample is not random also because of the following project requirements:

- 1. It is focused largely on small and medium-size enterprises, in line with the request of the Ministry of Economic Development. Using stratified random sampling could have addressed the non-proportional distribution of the sample, but the distribution of companies in the smart specializations is not known. Therefore, the lack of a clear sampling frame does not allow this technique to be used.
- 2. It aims to focus on companies with a potential to be innovative and excludes firms such as restaurants, retail stores and household service establishments.

The project included in the sample a mix of companies with diverse characteristics and features that are considered important in the context of the innovation policy. Thus, the following minimum quotas were targeted:

- 1. Micro-enterprises (less than 10 employees) 20 percent
- 2. Small and medium-size enterprises (between 10 and 250 employees) 75 percent
- 3. Large enterprises (more than 250 employees) 5 percent

# Weighting

No weighting was used

# Questionnaires

# Overview

The questionnaire had 100 questions (80 quantitative and 20 qualitative questions) based on a conceptual model of firm innovativeness. The questionnaire was modeled on a good international practice of enterprise and innovation surveys (such as the Eurostat's Community Innovation Survey or the EBRD's and World Bank's Business Environment and Enterprise Performance Survey (BEEPS)), but was extended to focus on more qualitative, contextual, and open-ended "why" questions.

# **Data Collection**

## **Data Collection Dates**

Start	End Cycle
2014-06	2015-10 N/A

## **Data Collection Mode**

Face-to-face [f2f]

#### **DATA COLLECTION NOTES**

More than 500 interviews were carried out by 11 experts within the time span of the project. The regional consultants, who were trained during the project, performed additional 135 interviews. There was an approximately equal division of interviews across the four participating regions, with at least 100 done in each of them. The project's pilot phase took place from June 2014 till March 2015 and comprised about 160 interviews. This delivered preliminary results and led to the modification of the project approach in the remaining three regions.

Unlike most surveys conducted by the national statistical office and international institutions, the interviews were conducted face to face with the company's top management and/or owners. The interviews usually took about 2 to 2.5 hours and were based on a questionnaire with quantitative and qualitative questions. Each interview was summarized in a "one pager" by the interviewing expert. The experts separated the interviewed firms, based on their expert judgment and a number of key innovative attributes, into five categories: "champions," "emerging champions," "sleeping beauties," "steady state," and "declining." At the end of each interview, the firm receives feedback from the expert. Data from each interview are aggregated and analyzed for policy insights.

Identification of firms that would meet the project's criteria and setting up interviews turned out to be a resource-intensive process. The calendar of meetings changed at a rapid pace and required a lot of flexibility on the side of the Bank's experts and regional consultants. It was also difficult to gather sufficient prior information about each company to ensure that the interview would meet the project's objective. The Bank used multiple sources of information to schedule interviews, including databases from business support institutions, marshal offices, and a proprietary firm dataset. These sources were helpful, although they had a limited number of firms that matched the project criteria and the 10 specializations selected for the project. For that reason, referrals from the interviewed companies for follow-up meetings with firms in the same value chain (customers, competitors, and suppliers) proved productive and are likely to be one of the main sources of information about potential candidates for interviews.

## **Data Collectors**

Name	Abbreviation	Affiliation
Experts hired by the World Bank		
Regional consultants		

# **Data Processing**

No content available

# Data Appraisal

No content available

# **File Description**

# **Variable List**

# edp\_database

Content

Cases 511 Variable(s) 127

Structure Type: Keys: ()

Version
Producer
Missing Data

# **Variables**

ID	Name	Label	Туре	Format	Question
V1	ID	What's the firm's ID?	contin	numeric	
V2	Region	In which region was the interview conducted?	discrete	numeric	
V3	age	What is the age of the firm?	contin	numeric	
V4	size	What is the size of the firm?	contin	numeric	
V5	turnover	What was the turnover of the firm in 2014? (in K PLN)	contin	numeric	
V6	turnover2013	What was the turnover of the firm in 2013? (in K PLN)	contin	numeric	
V7	turnover2012	What was the turnover of the firm in 2012? (in K PLN)	contin	numeric	
V8	RDduration	How long have you been investing in R&D? (in years)	contin	numeric	
V9	RDspending	What was the amount of R&D spending over the past 3 years? (in K PLN)	contin	numeric	
V10	Profitability	What was the net profitabililty of the firm (net profits/revenue) in the last ye	discrete	numeric	
V11	av_turnover1	What is the average growth over 1 year	contin	numeric	
V12	av_turnover3	What is the average growth over 3 years (%)	contin	numeric	
V13	q_strategy	What kind of Quality strategy do you implement?	discrete	numeric	
V14	cstrategy_1	Is your firm Reactive?	discrete	numeric	
V15	cstrategy_2	Is your firm Proactive?	discrete	numeric	
V16	cstrategy_3	Is your firm Pre-emptive?	discrete	numeric	
V17	risk	What is your risk taking rate?	discrete	numeric	
V18	q1	Do you spend resources to collect information about your existing customers?	discrete	numeric	
V19	q2	Do you use your suppliers to subcontract your R&D activities?	discrete	numeric	
V20	q3	Do you use your suppliers to subcontract your R&D activities? AMOUNT in K PLN	contin	numeric	
V21	q4	Do you spend resources to collect information about your existing or potential s	discrete	numeric	
V22	q5	Do you spend resources to collect information about your competitors?	discrete	numeric	

ID	Name	Label	Туре	Format	Question
V23	q6	How often do you develop partnership with your competitors?	discrete	numeric	
V24	q7	Do you systematically use and update Customer Relationship Management (CRM) syst	discrete	numeric	
V25	driver_1	How often is your company's management mindset a driver for innovation?	discrete	numeric	
V26	driver_3	How often is your R&D department a driver for innovation?	discrete	numeric	
V27	driver_4	How often is your Employees initiative a driver for innovation?	discrete	numeric	
V28	driver_5	How often do you use innovation to grow your business?	discrete	numeric	
V29	driver_6	How often are your New market opportunities or a market trend a driver for innov	discrete	numeric	
V30	driver_8	How often are your Competitors a driver for innovation?	discrete	numeric	
V31	driver_11	How often are your Suppliers a driver for innovation?	discrete	numeric	
V32	driver_15	How often are your Customers a driver for innovation?	discrete	numeric	
V33	driver_18	How often does the IPR drive your innovations?	discrete	numeric	
V34	driver_19	How often does the certification or other standards drive your innovations?	discrete	numeric	
V35	driver_21	How often does the legislation drive your innovations?	discrete	numeric	
V36	driver_23	How often do the declining margins drive your innovations?	discrete	numeric	
V37	driver_25	How often are sources of funding a driver for innovation?	discrete	numeric	
V38	driver_26	How often does the product quality drive your innovations?	discrete	numeric	
V39	driver_29	How often does the development of a new product or services drive your innovatio	discrete	numeric	
V40	driver_30	Is there something else that drives your innovations? What is it?	discrete	numeric	
V41	techinnosource_1	How often is Internal company resources a source for information about innovatio	discrete	numeric	How often are () a source of information about innovation for your company? Internal company resources
V42	techinnosource_2	How often are Research and development institutes a source for information about	discrete	numeric	How often are () a source of information about innovation for your company? Research and development

ID	Name	Label	Туре	Format	Question
V43	techinnosource_3	How often are Universities (incl. TTOs) a source for information about innovatio	discrete	numeric	How often are () a source of information about innovation for your company? Universities (incl. TTOs)
V44	techinnosource_6	How often are Business Support Institutions (e.g. Andvisory firms, intermediarie	discrete	numeric	How often are () a source of information about innovation for your company? Business support institutions (e.g. advisory firms, intermediaries, etc.)
V45	techinnosource_7	How often are Industry Consultants a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Industry consultants
V46	techinnosource_8	How often are Clusters members a source for Technicinformation about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Members of a cluster
V47	techinnosource_9	How often are Customers a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Customers
V48	techinnosource_11	How often are Suppliers a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Suppliers
V49	techinnosource_13	How often is Government (National or regional) a source for information about in	discrete	numeric	How often are () a source of information about innovation for your company? Government (national or regional)
V50	techinnosource_15	How often is EU a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? EU
V51	techinnosource_16	How often is Internet a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Internet

ID	Name	Label	Туре	Format	Question
V52	techinnosource_17	How often are Social Networks (real and virtual, e.g. LinkedIn) a source for inf	discrete	numeric	How often are () a source of information about innovation for your company? Social networks (real and virtual, e.g. LinkedIn)
V53	techinnosource_18	How often are Exhibitions a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Exhibitions
V54	techinnosource_19	How often are Seminars or lectures a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Seminars/lectures
V55	techinnosource_20	How often is Technical literature a source for information about innovation?	discrete	numeric	How often are () a source of information about innovation for your company? Technical literature
V56	techinnosource_21	How often are Investors (internal or external) a source for information about in	discrete	numeric	How often are () a source of information about innovation for your company? Investors (internal or external)
V57	techinnosource_22	Is there something else what you use as a source of information? What is it?	discrete	numeric	How often are () a source of information about innovation for your company? Other
V58	minnosource_1	Are Internal company resources an international source of information?	discrete	numeric	
V59	minnosource_2	Are Research and development institutes an international source of information?	discrete	numeric	
V60	minnosource_3	Are Universities (incl. TTOs) an international source of information?	discrete	numeric	
V61	minnosource_6	Are Business Support Institutions (e.g. Andvisory firms, intermediaries, etc.) a	discrete	numeric	
V62	minnosource_7	Are Industry Consultants an international source of information?	discrete	numeric	
V63	minnosource_8	Are Clusters members an international source of information?	discrete	numeric	
V64	minnosource_9	Are Customers an international source of information?	discrete	numeric	
V65	minnosource_11	Are Suppliers an international source of information?	discrete	numeric	
V66	minnosource_16	Is Internet an international source of information?	discrete	numeric	
V67	minnosource_17	Are Social Networks (real and virtual, e.g. LinkedIn) an international source of	discrete	numeric	

ID	Name	Label	Туре	Format	Question
V68	minnosource_18	Are Exhibitions an international source of information?	discrete	numeric	
V69	minnosource_19	Are Seminars or lectures an international source of information?	discrete	numeric	
V70	minnosource_20	Is Technical literature an international source of information?	discrete	numeric	
V71	minnosource_21	Are Investors (internal or external) an international source of information?	discrete	numeric	
V72	minnosource_22	Is something else an international source of information?	discrete	numeric	
V73	gconstraint_1	Is there something else that constraints the growth of your firm? (last one)	discrete	numeric	Is there something else that constraints the growth of your firm?
V74	gconstraint_2	How often is the management of your firm a constraint to growth?	discrete	numeric	How often is the management of your firm a constraint to growth?
V75	gconstraint_3	How often is the availability of hard skills (mostly technical) a constraint to	discrete	numeric	How often is the availability of hard skills (human capital) a constraint to growth?
V76	gconstraint_4	How often is the access to finance a constraint to growth of your company?	discrete	numeric	
V77	gconstraint_7	How often are the competitors a constraint to growth?	discrete	numeric	
V78	gconstraint_8	How often are the customers a constraint to growth?	discrete	numeric	
V79	gconstraint_9	How often are the barriers to entry new markets a constraint to growth?	discrete	numeric	How often are the barriers to entry new markets a constraint to growth?
V80	gconstraint_10	How often is the availability of soft skills (e.g. Managerial skills) a constrai	discrete	numeric	
V81	iconstraint_1	How often is the management of innovation a constraint to innovation?	discrete	numeric	
V82	iconstraint_2	How often are financial constraints (innovation financing, increase of running c	discrete	numeric	
V83	iconstraint_3	How often is the availability of hard skills (mostly technical) a constraint to	discrete	numeric	
V84	iconstraint_4	How often are technical constraints a barrier to innovation?	discrete	numeric	
V85	iconstraint_6	How often are customers a constraint to innovation?	discrete	numeric	
V86	iconstraint_7	How often are suppliers a constraint to innovation?	discrete	numeric	
V87	iconstraint_9	How often is the availability of soft skills (e.g. Managerial skills) a to inno	discrete	numeric	
V88	iconstraint_10	How often is the legislation a constraint to innovation?	discrete	numeric	

ID	Name	Label	Туре	Format	Question
V89	iconstraint_11	Is there something else that constraints the innovativity of your firm?	discrete	numeric	
V90	q11	What is your awareness about NATIONAL potential public support?	discrete	numeric	
V91	q12	What is your awareness about REGIONAL potential public support?	discrete	numeric	
V92	q13	How high is your level of satisfaction working with RDIs?	discrete	numeric	
V93	q14	How frequent is your access to public innovation support?	discrete	numeric	
V94	q17	Expert's assessment: willingness to grow	discrete	numeric	
V95	q18	Expert's assessment: visionary ability	discrete	numeric	
V96	q19	Expert's assessment: ability to change	discrete	numeric	
V97	q20	Expert's assessment: capacity to absorb changes	discrete	numeric	
V98	q21	Expert's assessment: potential to internationalize	discrete	numeric	
V99	q22	Expert's assessment: category of firm	discrete	numeric	
V100	Sup	Startup	discrete	numeric	
V101	i_product	Nb of innovation projects that have been developed during the past 3 years (pro	contin	numeric	
V102	i_process	Nb of innovation projects that have been developed during the past 3 years (pro	contin	numeric	
V103	i_marketing	Nb of innovation projects that have been developed during the past 3 years (mar	contin	numeric	
V104	i_organizational	Nb of innovation projects that have been developed during the past 3 years (org	contin	numeric	
V105	i_prod_scale	To your best knowledge your product innovations are new to the: 1) firm, 2) coun	discrete	numeric	
V106	i_proc_scale	To your best knowledge your process innovations are new to the: 1) firm, 2) coun	discrete	numeric	
V107	STEM	How many of the employees have the technical education (e.g. Science, engineerin	contin	numeric	
V108	RDemploy	How many employees in your firm are currently performing the R&D work? (number o	contin	numeric	
V109	Grants	What is a total amount of grants received in last three years? (in K)	contin	numeric	
V110	q15	What is total amount of innovation support you have received in last three years	contin	numeric	
V111	satisf	How satisfied are you when you do apply for support?	discrete	numeric	
V112	PKD1	PKD code	contin	numeric	
V113	PKD2	PKD code	contin	numeric	
V114	PKD3	PKD code	contin	numeric	
V115	ExportShare	Export share in sales (%)	contin	numeric	
V116	OverallQual	What was the overall quality of the interview (1 to 5 scale)	discrete	numeric	

ID	Name	Label	Туре	Format	Question
V117	Willingness	Respondent willingness to reveal information (1 to 5 scale)	discrete	character	
V118	medical_engineering_medical_biot	Are you in Smart specialization: medical engineering & medical biotech?	discrete	numeric	
V119	lifestyle_diseases_personalized_	Are you in Smart specialization: lifestyle diseases/ personalized med?	discrete	numeric	
V120	healthy_food	Are you in Smart specialization: healthy food?	discrete	numeric	
V121	biotech_for_specialty_chemicals_	Are you in Smart specialization: biotech for specialty chemicals & envir. eng.?	discrete	numeric	
V122	energy_production_storage_transf	Are you in Smart specialization: energy: production, storage, transfer?	discrete	numeric	
V123	smart_energy_efficient_construct	Are you in Smart specialization: smart & energy efficient construction?	discrete	numeric	
V124	natural_resources_extraction_pro	Are you in Smart specialization: natural resources: extraction, processing&subst	discrete	numeric	
V125	waste_management_recycling	Are you in Smart specialization: waste management & recycling?	discrete	numeric	
V126	composites_nanomaterials_nanopro	Are you in Smart specialization: composites/nanomaterials/nanoprocesses?	discrete	numeric	
V127	automation_robotics	Are you in Smart specialization: automation & robotics?	discrete	numeric	

# What's the firm's ID? (ID)

# File: edp database

#### Overview

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: 1-1073

Valid cases: 511 Invalid: 0 Minimum: 1 Maximum: 1073

# In which region was the interview conducted? (Region) File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 1-5

Valid cases: 511 Invalid: 0

# What is the age of the firm? (age) File: edp database

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: 0-2015

Overview

Valid cases: 511 Invalid: 0 Minimum: 0 Maximum: 2015

# What is the size of the firm? (size) File: edp database

## **Overview**

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: -7-9999

Valid cases: 511 Invalid: 0 Minimum: -7 Maximum: 9999

# What was the turnover of the firm in 2014? (in K PLN) (turnover) File: edp database

### **Overview**

Type: Continuous Format: numeric Width: 7 Decimals: 0 Range: -9-1300000 Valid cases: 506 Invalid: 5 Minimum: -9 Maximum: 1300000

# What was the turnover of the firm in 2013? (in K PLN) (turnover2013)

File: edp\_database

#### Overview

Type: Continuous Format: numeric Width: 7 Decimals: 0 Range: -9-1150000 Valid cases: 511 Invalid: 0 Minimum: -9 Maximum: 1150000

# What was the turnover of the firm in 2012? (in K PLN) (turnover2012)

File: edp database

### Overview

Type: Continuous Format: numeric Width: 7 Decimals: 0 Range: -9-1050000 Valid cases: 511 Invalid: 0 Minimum: -9 Maximum: 1050000

# How long have you been investing in R&D? (in years) (RDduration) File: edp database

### Overview

Type: Continuous Format: numeric Width: 2 Decimals: 0 Range: -9-88 Valid cases: 511 Invalid: 0 Minimum: -9 Maximum: 88

# What was the amount of R&D spending over the past 3 years? (in K PLN) (RDspending)

File: edp database

## Overview

Type: Continuous Format: numeric Width: 5 Decimals: 0 Range: -9-30000 Valid cases: 505 Invalid: 6 Minimum: -9 Maximum: 30000

What was the net profitability of the firm (net profits/revenue) in the last ye (Profitability)

File: edp\_database

# What was the net profitability of the firm (net profits/revenue) in the last ye (Profitability)

File: edp database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -999-500 Valid cases: 505 Invalid: 6

# What is the average growth over 1 year (av\_turnover1) File: edp\_database

#### **Overview**

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: -500-400 Valid cases: 254 Invalid: 257 Minimum: -500 Maximum: 400

# What is the average growth over 3 years (%) (av\_turnover3) File: edp\_database

### Overview

Type: Continuous Format: numeric Width: 3 Decimals: 0 Range: -30-950 Valid cases: 391 Invalid: 120 Minimum: -30 Maximum: 950

# What kind of Quality strategy do you implement? (q\_strategy) File: edp\_database

### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-5 Valid cases: 277 Invalid: 234

# Is your firm Reactive? (cstrategy\_1) File: edp database

### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

# Is your firm Proactive? (cstrategy\_2) File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1 Valid cases: 511 Invalid: 0

# Is your firm Pre-emptive? (cstrategy\_3) File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1 Valid cases: 511 Invalid: 0

# What is your risk taking rate? (risk) File: edp database

## Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -8-5 Valid cases: 511 Invalid: 0

# Do you spend resources to collect information about your existing customers? (q1)

# File: edp database

## Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1 Valid cases: 511 Invalid: 0

# Do you use your suppliers to subcontract your R&D activities? (q2) File: edp\_database

## Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1

Valid cases: 511 Invalid: 0

# Do you use your suppliers to subcontract your R&D activities? AMOUNT in K PLN (q3)

File: edp database

#### Overview

Type: Continuous Format: numeric Width: 7 Decimals: 0 Range: -8-4000000 Valid cases: 511 Invalid: 0 Minimum: -8 Maximum: 4000000

# Do you spend resources to collect information about your existing or potential s (q4)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -8-1 Valid cases: 511 Invalid: 0

# Do you spend resources to collect information about your competitors? (q5)

File: edp database

### **Overview**

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-9 Valid cases: 511 Invalid: 0

# How often do you develop partnership with your competitors? (q6) File: edp database

## Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

Do you systematically use and update Customer Relationship Management (CRM) syst (q7)

File: edp database

# Do you systematically use and update Customer Relationship Management (CRM) syst (q7)

File: edp database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 433 Invalid: 78

# How often is your company's management mindset a driver for innovation? (driver\_1)

File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often is your R&D department a driver for innovation? (driver 3)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often is your Employees initiative a driver for innovation? (driver 4)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often do you use innovation to grow your business? (driver\_5) File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often are your New market opportunities or a market trend a driver for innov (driver\_6)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often are your Competitors a driver for innovation? (driver\_8) File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often are your Suppliers a driver for innovation? (driver\_11) File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

## **Interviewer instructions**

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often are your Customers a driver for innovation? (driver\_15) File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often does the IPR drive your innovations? (driver\_18) File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often does the certification or other standards drive your innovations? (driver\_19)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often does the legislation drive your innovations? (driver\_21) File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

## **Interviewer instructions**

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often do the declining margins drive your innovations? (driver 23)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often are sources of funding a driver for innovation? (driver\_25)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often does the product quality drive your innovations? (driver 26)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often does the development of a new product or services drive your innovatio (driver\_29)

File: edp database

# How often does the development of a new product or services drive your innovatio (driver\_29)

File: edp database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# Is there something else that drives your innovations? What is it? (driver 30)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: 0-9999 Valid cases: 356 Invalid: 155

#### Interviewer instructions

Drivers are understood as incentives for the management that encourage innovation. The focus here is on a broad number of aspects that can motivate the management to innovation and the main task is to verify the intensity of each driver.

# How often is Internal company resources a source for information about innovatio (techinnosource\_1)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Literal question

How often are (...) a source of information about innovation for your company? Internal company resources

### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

How often are Research and development institutes a source for information about (techinnosource\_2)

File: edp\_database

# How often are Research and development institutes a source for information about (techinnosource\_2)

File: edp database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Valid cases: 511 Invalid: 0

# Range: -7-9999 Literal question

How often are (...) a source of information about innovation for your company? Research and development

#### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Universities (incl. TTOs) a source for information about innovatio (techinnosource\_3)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Valid cases: 511 Invalid: 0

# Range: -7-9999

How often are (...) a source of information about innovation for your company?

Universities (incl. TTOs)

### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Business Support Institutions (e.g. Andvisory firms, intermediarie (techinnosource\_6)

File: edp database

## Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

### Literal question

How often are (...) a source of information about innovation for your company? Business support institutions (e.g. advisory firms, intermediaries, etc.)

#### Interviewer instructions

# How often are Business Support Institutions (e.g. Andvisory firms, intermediarie (techinnosource\_6)

File: edp database

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Industry Consultants a source for information about innovation? (techinnosource 7)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

### Literal question

How often are (...) a source of information about innovation for your company? Industry consultants

#### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Clusters members a source for Technicinformation about innovation? (techinnosource\_8)

File: edp\_database

### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

## Literal question

How often are (...) a source of information about innovation for your company? Members of a cluster

### **Interviewer instructions**

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Customers a source for information about innovation? (techinnosource\_9)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

## Literal question

How often are (...) a source of information about innovation for your company? Customers

#### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Suppliers a source for information about innovation? (techinnosource\_11)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Valid cases: 511 Invalid: 0

# Range: -7-9999 Literal question

How often are (...) a source of information about innovation for your company? Suppliers

### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often is Government (National or regional) a source for information about in (techinnosource\_13)

File: edp\_database

## **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

# Literal question

How often are (...) a source of information about innovation for your company? Government (national or regional)

#### Interviewer instructions

# How often is Government (National or regional) a source for information about in (techinnosource\_13)

File: edp database

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often is EU a source for information about innovation? (techinnosource 15)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

### Literal question

How often are (...) a source of information about innovation for your company? EU

#### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often is Internet a source for information about innovation? (techinnosource\_16)

File: edp database

### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

## Literal question

How often are (...) a source of information about innovation for your company? Internet

### **Interviewer instructions**

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Social Networks (real and virtual, e.g. LinkedIn) a source for inf (techinnosource\_17)

File: edp\_database

### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

### Literal question

How often are (...) a source of information about innovation for your company? Social networks (real and virtual, e.g. LinkedIn)

### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Exhibitions a source for information about innovation? (techinnosource\_18)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Valid cases: 511 Invalid: 0

## Range: -9-9999 Literal guestion

How often are (...) a source of information about innovation for your company?

**Exhibitions** 

### **Interviewer instructions**

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Seminars or lectures a source for information about innovation? (techinnosource\_19)

File: edp\_database

## **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

#### Literal question

How often are (...) a source of information about innovation for your company?

Seminars/lectures

#### Interviewer instructions

# How often are Seminars or lectures a source for information about innovation? (techinnosource\_19)

File: edp database

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often is Technical literature a source for information about innovation? (techinnosource\_20)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

## Literal question

How often are (...) a source of information about innovation for your company? Technical literature

#### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# How often are Investors (internal or external) a source for information about in (techinnosource\_21)

File: edp\_database

### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

## Literal question

How often are (...) a source of information about innovation for your company? Investors (internal or external)

### **Interviewer instructions**

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# Is there something else what you use as a source of information? What is it? (techinnosource\_22)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 434 Invalid: 77

## Literal question

How often are (...) a source of information about innovation for your company? Other

#### Interviewer instructions

This page concentrates on sources of information about innovation, intensity of their use, and information about whether they are domestic or international in character. The point is to verify whether the interviewee uses various information sources to identify current technology developments that would enhance the company's ability to identify trends and possibly foresee market development. After asking about all the sources mentioned here, the interviewee is asked to indicate sources of an international nature, which should indicate the company's openness to international knowledge.

# Are Internal company resources an international source of information? (minnosource\_1)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1 Valid cases: 277 Invalid: 234

# Are Research and development institutes an international source of information? (minnosource\_2)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

# Are Universities (incl. TTOs) an international source of information? (minnosource 3)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1

Valid cases: 277 Invalid: 234

# Are Business Support Institutions (e.g. Andvisory firms, intermediaries, etc.) a (minnosource\_6)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Are Industry Consultants an international source of information? (minnosource 7)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Are Clusters members an international source of information? (minnosource 8)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Are Customers an international source of information? (minnosource\_9)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Are Suppliers an international source of information? (minnosource\_11)

File: edp\_database

# Are Suppliers an international source of information? (minnosource\_11)

File: edp database

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

# Is Internet an international source of information? (minnosource\_16)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

# Are Social Networks (real and virtual, e.g. LinkedIn) an international source of (minnosource 17)

File: edp database

### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1 Valid cases: 277 Invalid: 234

# Are Exhibitions an international source of information? (minnosource 18)

File: edp database

## Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Are Seminars or lectures an international source of information? (minnosource\_19)

File: edp database

# Are Seminars or lectures an international source of information? (minnosource 19)

File: edp database

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

### Is Technical literature an international source of information? (minnosource 20)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Are Investors (internal or external) an international source of information? (minnosource 21)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -9-1 Valid cases: 277 Invalid: 234

Is something else an international source of information? (minnosource 22)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-1 Valid cases: 277 Invalid: 234

Is there something else that constraints the growth of your firm? (last one) (gconstraint\_1)

File: edp database

# Is there something else that constraints the growth of your firm? (last one) (gconstraint\_1)

File: edp database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 434 Invalid: 77

### Literal question

Is there something else that constraints the growth of your firm?

#### Interviewer instructions

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often is the management of your firm a constraint to growth? (gconstraint 2)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

### Literal question

How often is the management of your firm a constraint to growth?

#### **Interviewer instructions**

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often is the availability of hard skills (mostly technical) a constraint to (gconstraint\_3)

File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### Literal question

How often is the availability of hard skills (human capital) a constraint to growth?

#### Interviewer instructions

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often is the access to finance a constraint to growth of your company? (gconstraint\_4)

File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often are the competitors a constraint to growth? (gconstraint 7)

File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### **Interviewer instructions**

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

### How often are the customers a constraint to growth? (gconstraint\_8)

File: edp\_database

#### Overview

Format: numeric Width: 4 Decimals: 0 Range: -7-9999

Type: Discrete

Valid cases: 511 Invalid: 0

#### **Interviewer instructions**

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often are the barriers to entry new markets a constraint to growth? (gconstraint 9)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Literal question

How often are the barriers to entry new markets a constraint to growth?

#### Interviewer instructions

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often is the availability of soft skills (e.g. Managerial skills) a constrai (gconstraint\_10)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### Interviewer instructions

This page helps identify internal and external growth constraints. It is important to remember that these constraints refer strictly to company growth and not to innovation growth. Internal constraints may be difficult to pinpoint because the respondent must do some self-assessment here, which is why the interviewer's interaction will be appreciated. The interviewer is also encouraged to share some examples from his/her own experience in order to acquaint the respondent with the topic.

# How often is the management of innovation a constraint to innovation? (iconstraint 1)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 434 Invalid: 77

### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

# How often are financial constraints (innovation financing, increase of running c (iconstraint\_2)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

# How often is the availability of hard skills (mostly technical) a constraint to (iconstraint\_3)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

### How often are technical constraints a barrier to innovation? (iconstraint 4)

File: edp database

### Overview

Type: Discrete

Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

### How often are customers a constraint to innovation? (iconstraint\_6) File: edp\_database

### How often are customers a constraint to innovation? (iconstraint\_6) File: edp\_database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### **Interviewer instructions**

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

### How often are suppliers a constraint to innovation? (iconstraint\_7) File: edp\_database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

# How often is the availability of soft skills (e.g. Managerial skills) a to inno (iconstraint 9)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

#### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

### How often is the legislation a constraint to innovation? (iconstraint\_10)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999

Valid cases: 511 Invalid: 0

#### Interviewer instructions

# How often is the legislation a constraint to innovation? (iconstraint\_10)

File: edp database

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

### Is there something else that constraints the innovativity of your firm? (iconstraint 11)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 432 Invalid: 79

#### Interviewer instructions

This page is similar to the previous page; its purpose is to help identify constraints encountered by the enterprise when embarking on innovation development or implementation. Barriers have been divided into internal and external ones. The interviewer should stress that this part focuses on innovation, which is not the same as growth, as mentioned previously.

# What is your awareness about NATIONAL potential public support? (q11)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

### What is your awareness about REGIONAL potential public support? (q12)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -7-9999 Valid cases: 511 Invalid: 0

How high is your level of satisfaction working with RDIs? (q13) File: edp database

### How high is your level of satisfaction working with RDIs? (q13) File: edp\_database

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -9-9999 Valid cases: 511 Invalid: 0

# How frequent is your access to public innovation support? (q14) File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: -8-9999 Valid cases: 511 Invalid: 0

Expert's assessment: willingness to grow (q17) File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-5 Valid cases: 511 Invalid: 0

Expert's assessment: visionary ability (q18) File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-5 Valid cases: 511 Invalid: 0

Expert's assessment: ability to change (q19) File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-5 Valid cases: 511 Invalid: 0

### Expert's assessment: capacity to absorb changes (q20) File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-5 Valid cases: 511 Invalid: 0

### Expert's assessment: potential to internationalize (q21) File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-5 Valid cases: 511 Invalid: 0

### Expert's assessment: category of firm (q22)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 4 Decimals: 0 Range: 0-9999 Valid cases: 511 Invalid: 0

### Startup (Sup)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

# Nb of innovation projects that have been developed during the past 3 years (pro (i\_product)

File: edp\_database

### Overview

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: -8-4000 Valid cases: 354 Invalid: 157 Minimum: -8 Maximum: 4000

# Nb of innovation projects that have been developed during the past 3 years (pro (i process)

File: edp database

#### Overview

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: -8-1000 Valid cases: 354 Invalid: 157 Minimum: -8 Maximum: 1000

Nb of innovation projects that have been developed during the past 3 years (mar (i marketing)

File: edp database

#### Overview

Type: Continuous Format: numeric Width: 2 Decimals: 0 Range: -8-53 Valid cases: 354 Invalid: 157 Minimum: -8 Maximum: 53

Nb of innovation projects that have been developed during the past 3 years (org (i organizational)

File: edp database

#### Overview

Type: Continuous Format: numeric Width: 2 Decimals: 0 Range: -8-36 Valid cases: 354 Invalid: 157 Minimum: -8 Maximum: 36

To your best knowledge your product innovations are new to the:

1) firm, 2) coun (i\_prod\_scale)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-12 Valid cases: 277 Invalid: 234

To your best knowledge your process innovations are new to the:

1) firm, 2) coun (i proc scale)

File: edp\_database

To your best knowledge your process innovations are new to the:

1) firm, 2) coun (i proc scale)

File: edp database

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -8-3 Valid cases: 277 Invalid: 234

How many of the employees have the technical education (e.g. Science, engineerin (STEM)

File: edp database

#### **Overview**

Type: Continuous Format: numeric Width: 3 Decimals: 0 Range: -9-300 Valid cases: 277 Invalid: 234 Minimum: -9 Maximum: 300

How many employees in your firm are currently performing the R&D work? (number o (RDemploy)

File: edp database

#### Overview

Type: Continuous Format: numeric Width: 2 Decimals: 0 Range: -7-60 Valid cases: 277 Invalid: 234 Minimum: -7 Maximum: 60

What is a total amount of grants received in last three years? (in K) (Grants)

File: edp\_database

#### Overview

Type: Continuous Format: numeric Width: 6 Decimals: 0 Range: -9-250000 Valid cases: 354 Invalid: 157 Minimum: -9 Maximum: 250000

What is total amount of innovation support you have received in last three years (q15)

File: edp database

# What is total amount of innovation support you have received in last three years (q15)

File: edp database

Type: Continuous Format: numeric Width: 6 Decimals: 0 Range: -9-120000 Valid cases: 432 Invalid: 79 Minimum: -9 Maximum: 120000

# How satisfied are you when you do apply for support? (satisf) File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 2 Decimals: 0 Range: -7-7 Valid cases: 354 Invalid: 157

### PKD code (PKD1) File: edp database

#### Overview

Type: Continuous Format: numeric Width: 5 Decimals: 0 Range: -9-62012 Valid cases: 354 Invalid: 157 Minimum: -9 Maximum: 62012

### PKD code (PKD2) File: edp database

#### Overview

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: 0-9120 Valid cases: 354 Invalid: 157 Minimum: 0 Maximum: 9120

### PKD code (PKD3) File: edp\_database

#### Overview

Type: Continuous Format: numeric Width: 4 Decimals: 0 Range: 0-9332 Valid cases: 354 Invalid: 157 Minimum: 0 Maximum: 9332

### Export share in sales (%) (ExportShare)

File: edp database

#### **Overview**

Type: Continuous Format: numeric Width: 3 Decimals: 0 Range: -7-100 Valid cases: 354 Invalid: 157 Minimum: -7 Maximum: 100

### What was the overall quality of the interview (1 to 5 scale) (OverallQual)

File: edp database

#### **Overview**

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-5 Valid cases: 178 Invalid: 333

### Respondent willingness to reveal information (1 to 5 scale) (Willingness)

File: edp database

#### Overview

Type: Discrete Format: character Width: 1 Valid cases: 179

Are you in Smart specialization: medical engineering & medical biotech? (medical\_engineering\_medical\_biot)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: lifestyle diseases/ personalized med? (lifestyle diseases personalized )

File: edp database

Are you in Smart specialization: lifestyle diseases/ personalized med? (lifestyle\_diseases\_personalized\_)

File: edp database

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: healthy food? (healthy\_food) File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: biotech for specialty chemicals & envir. eng.? (biotech for specialty chemicals )

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: energy: production, storage, transfer? (energy\_production\_storage\_transf)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: smart & energy efficient construction? (smart\_energy\_efficient\_construct)

File: edp database

Are you in Smart specialization: smart & energy efficient construction? (smart\_energy\_efficient\_construct)

File: edp database

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: natural resources: extraction, processing&subst (natural\_resources\_extraction\_pro)

File: edp\_database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: waste management & recycling? (waste\_management\_recycling)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: composites/nanomaterials/nanoprocesses? (composites\_nanomaterials\_nanopro)

File: edp database

#### Overview

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1 Valid cases: 511 Invalid: 0

Are you in Smart specialization: automation & robotics? (automation robotics)

File: edp database

# Are you in Smart specialization: automation & robotics? (automation\_robotics)

File: edp\_database

Type: Discrete Format: numeric Width: 1 Decimals: 0 Range: 0-1

Valid cases: 511 Invalid: 0

### **Related Materials**

### **Questionnaires**

### **Enterprise Innovation Assessment**

Title Enterprise Innovation Assessment

Language English

Filename edp quest eng feb 2016.xlsx

### **Reports**

### Toward an Innovative Poland: The Entrepreneurial Discovery Process and Business Needs Analysis

Title Toward an Innovative Poland: The Entrepreneurial Discovery Process and Business Needs Analysis

Author(s) The World Bank Group

Language English

Filename 106148-REPLACEMENT-v2-English-REPORT-Web.pdf

### **Technical documents**

### Firm-Level Interviews: Methodological Manual

Title Firm-Level Interviews: Methodological Manual

Language English

Filename EDPRASPolandENGJUL2016MManual.pdf

### Summary Information on the Interview Process and Smart Labs

Title Summary Information on the Interview Process and Smart Labs

Language English

Filename EDPRASPolandENGJUL2016Summary.pdf