

Scripts of the experiments

1 RECIPIENTS' EXPERIMENT

I. SAMPLE VARIABLES = information for scripter

Online: background variables need to be foreseen for:

Country	National languages
1 Germany	German
2 Italy	Italian

II. INTRODUCTION AND SCREENER

D1 GENDER_NONBINARY_. Are you...?

- ☐ _1 Male
- ☐ _2 Female
- ☐ _3 Other
- ☐ _4 Prefer not to answer

Scripter: if Gender_Nonbinary = 3 or 4, allocate to least filled category 1 or 2 for quota setting

Base: All

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

D1. YEAR/MONTH. What is your date of birth?

- ☐ YEAR
- ☐ _1910 1910
- ☐ ...
- ☐ _2015 2015
- ☐ MONTH
- ☐ _1 January
- ☐ _2 February
- ☐ _3 March
- ☐ _4 April
- ☐ _5 May
- ☐ _6 June
- ☐ _7 July
- ☐ _8 August
- ☐ _9 September
- ☐ _10 October
- ☐ _11 November
- ☐ _12 December

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

QUOTAGERANGE [Hidden]. Hidden Question - QUOTAGERANGE "this is a dummy question that will hold age breaks" for the quotas that should be defined by the PM; it CAN be edited and lines can be added to meet survey objectives.

- ☐ _18_24 "18-24",
- ☐ _25_34 "25-34",
- ☐ _35_44 "35-44"
- ☐ _45_54 "45-54"
- ☐ _55_65 "55-65"

[TERMINATE IF LESS THAN 18 OR MORE THAN 65]

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

RESP_AGE [Hidden]. Hidden Question - RESP_AGE "this is a dummy question that will hold age"

Base: all respondents

D3 [S] In which region do you live?

Scripter: insert country specific lists based: See Excel D3 Region

Scripter: include Recode Region based on D3 (see Excel D3 Region)

998. Don't know

999. Prefer not to answer

Scripter: IF D3 = 998 OR 999: SCREEN OUT

Base: all respondents

Intro1.

Welcome and thank you for participating in this experiment! This study is being conducted by IPSOS on behalf of the Joint Research Centre.

This study requires your complete, undistracted attention. Please remove any distractions that could interfere during the study (e.g. turn off email notifications and chat windows).

There are two parts in this experiment. We first give you instructions for the first part. Once you are finished with the first part you will get instructions for the second part. Finally, we will ask you a few questions about yourself.

Please read instructions carefully as you will only be able to proceed after we check that you understood them.

The experiment should take around 20 minutes to complete.

Base: all respondents

Intro2.

As usual, you will receive a participation fee right after completing this study.

In addition to this, you will be able to gain points by doing various tasks and making decisions in this study. The points you earn come on top of your participation fee.

At the end of the survey, the total amount of points you have earned will be converted into real money at the following rate:

100 points = 4.3 €.

Please note that, irrespective of your actions, by completing the study you will always at least earn the participation fee.

Base: all respondents

Intro4.

Here are the instructions for the first part of the experiment.

There are two types of people in this first part, employees and employers.

Your role is that of an employee.

Another person like you takes the role of the employer.

Base: all respondents

Intro5.

What do you have to do?

You will be presented with a sum of **4 numbers**. For example, a sum may look like: $2+4+3+7$ or $3+6+4+5$. Your task is to add up those numbers and write down the result. Then you get a new sum to compute.

You will have **5 minutes** to solve as many sums as possible. You will see a timer at the top of the screen which tells you how much time you have left.

You can use whatever means you like to sum the numbers, including using a computer, a calculator, pen and paper, or just do the sum in your head.

At the end of the 5 minutes, you will get a **score** that will be equal to the number of sums you added up correctly during those 5 minutes.

Your employer will pay you a salary of 100 points and will earn points that depend on your score. The higher your score, the more points your employer will earn.

Base: all respondents

QCHECK1.

Please answer the following questions correctly before being allowed to move to the experiment.

They have 2 chances per question to answer correctly, to be captured in the data if they needed 1 or 2 attempts per question.

In case of incorrect answer, pls show below warning message: This is not correct. You can check the instructions again via this link (Scripter: add pop-up screen where Intro4/5 are shown again)

If they still answer the question incorrectly the second time, screenout.

1. What kind of task do you have to do? [S]

1. Describe images
2. Add up numbers
3. Transcribe a text

Scripter: correct answer=2

2. How much time do you have to do this task? [S]

1. 3 minutes
2. 5 minutes
3. 7 minutes

Scripter: correct answer=2

Base: all respondents

QTEST1. [Q, min 0, max 40]

Congratulations, you answered all questions correctly. We now give you an opportunity to test how to input your answer and get to the next sum.

What is the sum of below numbers?

6+1+6+7 =

Please press Enter or click on “Next” to input your answer.

Base: all respondents

Intro8.

Congratulations, you managed to input your answer for one sum.

Please click on Next once you are ready. You will then have 5 minutes to do sums.

Base: all respondents

QTEST2. [Q, min 0, max 40]

Scripter : script 120 sums (+ correct answer, so we can calculate how many sums they filled in correctly), show 1 sum per screen, once answered, move to next sum, show timer on screen of 5 minutes, which counts down. Once time is 0, calculate the number of correct answers and move to the next screen

Base: all respondents

Intro9. [Q, min 0, max number of sums completed]

You finished this part of the experiment and completed [Scripter: add number of sums completed] sums.

How many of those sums do you think you answered correctly?

Base: all respondents

Intro10.

You answered [Scripter: add number of correct answers] sums correctly.

Base: all respondents

Intro11.

We now move on to the second part of the experiment.

There are two types of people in this second part, borrowers and bankers.

Your role is that of a borrower.

Another person like you takes the role of the banker.

Base: all respondents

Intro12_Input. [Q, min 0, max 300]

What do you have to do?

The banker has 100 points. He or she can keep them, or lend them to you.

If they lend it to you, then you can undertake a project which earns you 300 points.

You then have to decide how many points to give back to the banker.

You can repay anything between 0 points and 300 points, as you wish.

As an example, please choose a number between 0 and 300 (R)

Scripter: show open text box, numeric, min 0, max 300

Base: all respondents

Intro12_Retry.

If you repay [Scripter: insert R] points,

Then you get [Scripter: insert 300-R] points and

The banker gets [Scripter: insert R] points

The banker gets 100 points if he or she decides not to lend to you.

You can change the number on previous screen and see how much you earn and how much the banker earns by clicking “yes”, or continue the survey by choosing “no”.

Base: all respondents

QCHECK2.

Let us now check that you understood the instructions for this second part correctly.

They have 2 chances per question to answer correctly, to be captured in the data if they needed 1 or 2 attempts per question.

In case of incorrect answer, pls show below warning message: This is not correct. You can check the instructions again via this link (Scripter: add pop-up screen where Intro11/12 are shown again)

If they still answer the question incorrectly the second time, screenout.

Please choose a number between 0 and 300 (R)

Scripter: show open text box, numeric, min 0, max 300

Suppose you repay [Scripter: insert R] points.

1. How many points do you get? [Q, min 0, max 300]

Scripter: correct answer=300-R

2. How much does the banker get? [Q, min 0, max 300]

Scripter: correct answer=R

3. How much does the banker get if he or she decides not to lend you?

1. 0 points
2. 100 points
3. 200 points
4. 300 points

Scripter: correct answer=100

Base: all respondents

QTEST3. [Q, min 0, max 300]

We now ask you to make your decision.

This decision determines what you and the banker will earn.

The banker lent you 100 points.

You now have 300 points.

How many points do you choose to give back to the banker?

Base: all respondents

Intro13.

You are finished with this part of the experiment.

You decided to repay [Scripter: insert answer QTEST3] points.

Base: all respondents

Intro14.

We have a few more questions for you.

Please complete the brief questionnaire that follows to finish the study.

You will receive your final payment once you completed the questionnaire.

Please answer truthfully to the best of your abilities.

Base: all respondents

Q1. [O]

What do you think this experiment was about?

Base: all respondents

Q2. [SGRID]

To what extent do you agree with the below statements about the **first part of the experiment where you summed numbers?**

Rows (randomize):

1. I tried to do my best
2. I enjoyed the task
3. The task was difficult
4. It was hard for me to understand what I had to do
5. I think I did well in this task

Columns:

1. Totally disagree
2. Tend to disagree
3. Tend to agree
4. Totally agree

Base: all respondents

Q3. [S]

Please choose the option that best describes your decision about the **second part of the experiment where you had to repay a loan.**

1. I kept as many points for me as possible
2. I simply paid back the loan but not more
3. I tried to share the earnings from the loan equally
4. I wanted to reward the banker for lending to me

Base: all respondents

D4 [S]

What is the highest level of school you have completed, or the highest degree you have received?

Scripter: insert country specific lists: See Excel D4 Education

Scripter: include recode into ISCED (see Excel D4 Education)

98. Don't know

99. Prefer not to answer

Base: all respondents

D5. [S]

If country=1: Do you have the German nationality?

If country=2: Do you have the Italian nationality?

1. Yes
2. No

Base: all respondents

D6. [S]

What is your current occupation?

1. Student
2. Working full time
3. Working part time
4. Unemployed
5. Retired
6. Looking for a job
7. Housewife/houseman
98. Other

Base: IF D6=2 or 3

D7. [S]

What sector are you employed in?

1. Public
2. Private
3. Self-employed

Base: IF D6=2 or 3

D8. [S]

How large is the company you work in?

1. Less than 10 employees
2. 10-49 employees
3. 50-249 employees
4. More than 250 employees
99. Don't know

Base: all respondents

D9. [S]

Could you please indicate your household's monthly income (that is, after income taxes have been paid)?

Your total household income includes your own income plus the incomes of all household members who live together with you. The total income includes income from jobs, pensions, social security, interest, dividends, capital gains claimed, profits from businesses, unemployment payments, and all other money you received.

Scripter: if country =1 (Germany)

1. Less than 1299 euro

2. between 1300 and 1749 euro
3. between 1750 and 2199 euro
4. between 2200 and 2849 euro
5. 2850 euro or more

Scripter: if country = 2 (Italy)

1. less than 849 euro
2. between 850 and 1249 euro
3. between 1250 and 1649 euro
4. between 1650 and 2199 euro
5. 2200 euro or more

ALL COUNTRIES

98. Don't know
99. Prefer not to answer

Base: all respondents

D10. [S]

What social class do you feel you belong to?

1. Working class
2. Middle class
3. Upper class
99. Prefer not to answer

Base: all respondents

D11. [Slider]

Please answer the following questions on a scale from 1 to 4. 1 means you fully agree with the statement on the left and 4 means you fully agree with the statement on the right. Please choose numbers in between if you do not fully agree with either one of the two statements.

1. Do you generally...
 1. try to avoid taking risks
 4. are comfortable with taking risks
2. Do you think...
 1. incomes should be made more equal
 4. incomes should depend more on individual effort
3. Do you think...
 1. competition is good, it brings the best out of people
 4. competition is bad, it brings the worst out of people
4. Do you think...

1. what happens to you is your own doing
4. you have little influence over what happens to you
5. Would you say that...
1. most people can be trusted
4. you can't be too careful in dealing with people.

Base: all respondents

D12. [SGRID]

To what extent do you agree with the below statements?

I see myself as someone who ...

Rows (randomize):

1. worries a lot
2. gets nervous easily
3. remains calm in tense situations
4. is talkative
5. is outgoing, sociable
6. is reserved
7. is original, comes up with new ideas
8. values artistic, aesthetic experiences
9. has an active imagination
10. is sometimes rude to others
11. has a forgiving nature
12. is considerate and kind to almost everyone
13. does a thorough job
14. tends to be lazy
15. does things efficiently

Columns:

1. Totally disagree
2. Tend to disagree
3. Tend to agree
4. Totally agree

Scripter: calculate below variables:

Openness: mean 7 8 9

Conscientiousness: mean 13 -14 15

Extroversion: mean 4 5 -6

Agreeableness: mean -10 11 12

Neuroticism: mean 1 2 -3

Base: all respondents

QEND.

Thank you for taking part in this study!

You will receive the participation fee now as compensation for your participation.

You will also receive an amount that will depend on the decision of your employer for the first part of the experiment, **or** the decision of your banker for the second part of the experiment.

The employer will be given some other information about you such as your age, gender or nationality. He or she will then decide whether to hire you. He or she will **not** know your score in the summing task. You will receive 100 points (4.3 euros) if they decide to hire you.

The banker will also be given the same information about you. He or she will decide whether to lend to you. He or she will **not** know how much you chose to repay if you got a loan. You will receive 0 points (0 euros) if they chose not to lend to you, and 300 points (13 euros) **minus** what you chose to repay, if they chose to lend to you.

We will choose at random whether you are paid your additional earning based on the first task or the second.

It will take at least two months for us to collect decisions by the banker and the employer, so please be patient until we tell you how much you earned in addition to your participation fee.

2 DECIDERS' HIRING EXPERIMENT

I. SAMPLE VARIABLES = information for scripter

Online: background variables need to be foreseen for:

Country	National languages
1 Germany	German
2 Italy	Italian

Treatment:

1. Treatment 1: deciders make decisions on their own
2. Treatment 2: deciders get recommendations from an "efficient" AI
3. Treatment 3: deciders get recommendations from a "fair" AI

Scripter: random assignment to variable Treatment, used least filled method PER COUNTRY AND PER GROUP (Employer / Lender)

II. INTRODUCTION AND SCREENER

SCR1. [S, rotate]

In which of the following sectors are you currently working?"

1. Human Resources Management
2. Retail Banking
3. IT Services
4. Communications
5. Wholesale and retail trade
6. Manufacturing
7. Construction
8. Transportation
9. Food services
10. Other

Scripter: create hidden variable GROUP:

1. Employer IF SCR1=1

2. Lender IF SCR1=2

IF SCR1=2-10: SCREENOUT

Base: All

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

D1. YEAR/MONTH. What is your date of birth?

- ☐ YEAR
- ☐ _1910 1910
- ☐ ...
- ☐ _2015 2015
- ☐ MONTH
- ☐ _1 January
- ☐ _2 February
- ☐ _3 March

- ☐ _4 April
- ☐ _5 May
- ☐ _6 June
- ☐ _7 July
- ☐ _8 August
- ☐ _9 September
- ☐ _10 October
- ☐ _11 November
- ☐ _12 December

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

QUOTAGERANGE [Hidden]. Hidden Question - QUOTAGERANGE "this is a dummy question that will hold age breaks" for the quotas that should be defined by the PM; it CAN be edited and lines can be added to meet survey objectives.

- ☐ _18_24 "18-24",
- ☐ _25_34 "25-34",
- ☐ _35_44 "35-44"
- ☐ _45_54 "45-54"
- ☐ _55_65 "55-65"

[TERMINATE IF LESS THAN 18 OR MORE THAN 65]

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

RESP_AGE [Hidden]. Hidden Question - RESP_AGE "this is a dummy question that will hold age"

Base: all respondents

D2 GENDER_NONBINARY_. Are you...?

- ☐ _1 Male
- ☐ _2 Female
- ☐ _3 Other
- ☐ _4 Prefer not to answer

Scripter: if Gender_Nonbinary = 3 or 4, allocate to least filled category 1 or 2 for quota setting

Base: all respondents

D3

[S]

In which region do you live?

Scripter: insert country specific lists based: See Excel D3 Region

Scripter: include RecodeRegion based on D3 (see Excel D3 Region)

998. I don't know

999. Prefer not to answer

Scripter: IF D3 = 998 OR 999: SCREEN OUT

Base: all respondents

Intro1.

Welcome and thank you for participating in this survey! This study is being conducted by IPSOS on behalf of the Joint Research Centre.

This study requires your complete, undistracted attention. Please remove any distractions that could interfere during the study (e.g. turn off email notifications and chat windows).

This study should take about 20 minutes of your time.

You can follow your progress in the progress bar above.

Please read instructions carefully as you will only be able to proceed after we check that you understood them.

Base: all respondents

Intro2.

As usual, you will receive a participation fee right after completing this study.

In addition to this, you will receive points which will depend on your decisions in this survey and on the decisions of some other participants. The points you earn come on top of your participation fee.

At the end of the survey, the total amount of points you have earned will be converted into real money at the following rate:

$$100 \text{ points} = 4.3 \text{ €}.$$

Please note that, irrespective of your actions, by completing the study you will always at least earn the participation fee.

Base: all respondents

Intro3.

You are the owner of a firm, and you have to choose who to hire.

We recruited job applicants, coming from Italy and Germany. They differ in terms of age, gender, education, and other variables we will present to you.

They are real people who will be affected by your decisions. Those you hire will receive a message telling them they were selected and will be paid a wage of 4.3 euro.

Those you do not hire will receive a message telling them they were not selected and they will be paid nothing.

Base: all respondents

Intro4.

You will be shown job applicants in pairs. You must choose who to hire in each pair. You will have to choose one person for each pair a total of 12 times.

At the end of the survey, we will look at your decision for one of those 12 pairs. Any one of your decisions may be looked at, so all your decisions are equally important!

The person you hired in that pair will complete a task for you.

That task consists in computing as many sums of 4 numbers, such as $2+4+3+7$, in 5 minutes.

Scripter: We vary the pool of applicants to cover all recipients, i.e. there are 12 groups of 2.

In the Excel we put the people in two pools (pool 1 and pool 2), each pool counting 12 groups (1 more than planned originally). You show only one pool to each decider, but you randomize what pool people are exposed to (half of deciders see pool 1, half see pool 2) – least filled per country.

On top, you randomize the order of groups they see (least filled per country)

Please make sure to record what pool the person saw and the order in which they saw each group.

We will provide the list of all applicants, put into groups.

Base: all respondents

Intro5.

You get 4 points for each sum made correctly by the person you hired.

The person you hire also gets a wage of 100 points (4.3 euro) from you.

Your net payoff is therefore (correct sums * 4 points) – (100 points).

The higher the score of the person you hired, the more you earn. Job applicants manage 64 correct sums on average, but this can vary between 34 and 107 depending on the job applicant.

The following table shows you how much you earn depending on the number of correct sums made by the person you hire.

Correct sums	34	40	50	60	64	70	80	90	100	107
Your earning (points)	36	60	100	140	156	180	220	260	300	328
Your earning (euro)	1,5	2,6	4,3	6,0	6,7	7,7	9,5	11,2	12,9	14,1

Only the person you hire gets a wage. The other person gets nothing.

Please therefore be careful when choosing who to hire! This determines how much you and the job applicants earn!

Base: all respondents

Check1.

Please answer the following questions correctly before being allowed to move to the survey.

Scripter: They have 2 chances per question to answer correctly, to be captured in the data if they needed 1 or 2 attempts per question.

In case of incorrect answer, pls show below warning message: This is not correct. You can check the instructions again via this link (Scripter: add pop-up screen where Intro1/2/3/4/5 are shown again)

If they still answer the question incorrectly the second time, screenout.

1. What kind of task do employees have to do?
 1. Describe images
 2. Add up numbers
 3. Transcribe a text

Scripter: correct answer=2

2. How much do you get for each correct sum computed by your employee?
 1. 4 points
 2. 5 points
 3. 100 points

Scripter: correct answer=1

3. What is the wage you pay the person you hire?
 1. 4 points
 2. 100 points
 3. The person you hire receives no wage

Scripter: correct answer= 2

4. How much does a job applicant earn if you do not select him or her as an employee?
 1. 100 points
 2. 4 points
 3. 0 points

Scripter: correct answer=3

Base: all respondents

Intro6.

You will get the following information about job applicants:

- Gender: Male or Female
- Age: 18-34, 35-54, 55-65
- Nationality: German or Italian
- Level of education: Low (up to high school), Middle (up to a bachelor) or High (masters and more)
- Income: Low (less than median income), Middle, High (top 20%), Unknown
- Interview: Bad, OK, Good, Very Good. This is based on answers to a questionnaire that evaluates a participant's degree of motivation and self-confidence

Scripter: only to be shown for the main fieldwork, not for the pilot:

You can see the questionnaire that was filled by the job applicants by opening this link [here](#).

Base: all respondents

QTEST1. [S]

How to make a choice?



Scripter: show button below each person, so that the respondent can choose a person

You will get information about the job applicants.

Here, you see that job applicant A is a man aged between 18 and 34 from Germany with a High level of education, high level of income and an OK interview. Job applicant B is a woman aged between 35 and 54 from Italy with middle level of education, middle income and a good interview.

You have to choose ONE person to hire between the two.

Please have a try by choosing one of the persons in this example.

	Job applicant A	Job applicant B
		
ID		

Gender	Male	Female
Age	18-34	35-54
Nationality	German	Italian
Level of education	High	Middle
Income	High	Middle
Interview	OK	Good
	(show selection button)	(show selection button)
	I want to hire A	I want to hire B

Base: all respondents

QRANK1. [SGRID]

Please tell us which personal characteristics you think are most important when selecting among job applicants.

Scripter: Var A, Var B, Var C, to be rated into categories such as "High Importance", "Moderate Importance", "Low Importance", "Irrelevant".

Rows

1. Gender
2. Age
3. Nationality
4. Level of education
5. Income
6. Interview

Column

1. High Importance
2. Moderate importance
3. Low importance
4. Irrelevant

Base: for items in QRANK1 rated 1,2 or 3

QRANK2. [S]

Please now tell us what type of job applicant you would favour when deciding who to hire?

[scripter: give this list in the order of importance from QRANK1 and let people click on the favoured type. Do not list variables that were ranked as irrelevant in QRANK1.]

1. Gender
 1. Women
 2. Men
2. Age
 1. 18-34 year old
 2. 35-54 year old

3. 55-65 year old

3. Country
 1. Germany
 2. Italy
4. Level of education
 1. Low
 2. Medium
 3. High
5. Income
 1. Low
 2. Medium
 3. High
 4. Unknown
6. Interview
 1. Bad
 2. OK
 3. Good
 4. Very Good

Base: IF Treatment =1

Intro8.

You are now ready to start.

We will show you 12 choices to make among 2 job applicants each time.

Please choose your preferred job applicants in each of those cases.

Base: IF Treatment 1

QT1_1. [S]

We show you below the characteristics of two job applicants.

Please now choose your preferred job applicant.

	Job applicant A (Scripter: use gender specific avatar)	Job applicant B (Scripter: use gender specific avatar)
ID		
Gender		
Age		
Nationality		
Level of education		
Income		

Interview		
-----------	--	--

Please now choose your preferred job applicant.

(show selection button)	(show selection button)
I want to hire A	I want to hire B

Scripter: add info from the Excel

Repeat this question 12x and capture decisions as QT1_1 till QT1_12. Pls make sure timestamps are added per screen!

Randomize QT1_1 till QT1_12

Base: IF Treatment= 2 or 3

Intro9.

You will get support from a *decision support system (DSS)* when making choices between job applicants.

The DSS analyzed information about past job applicants and their performance in the task.

Based on this data, the DSS is able to predict performance of job applicants.

This is translated into a grade which is shown to you in the last row below information about the job applicants.

This grade measures how high the job applicant is expected to score compared with others.

For each job applicant, we also show you how much each variable contributed to the grade.

Base: IF Treatment =2

Intro10.

HOW WAS THE DSS PROGRAMMED?

The DSS correlated the performance of job applicants in the summing task with their personal characteristics.

This includes protected characteristics, such as gender or nationality.

The DSS was programmed to **INCLUDE THE IMPACT** of those variables in a job applicant's grade.

Relying on the DSS may therefore lead you to discriminate across job applicants based on protected characteristics.

You are free to choose according to the grade given by the DSS, or not.

Base: IF Treatment =3

Intro11.

HOW WAS THE DSS PROGRAMMED?

The DSS correlated the performance of job applicants in the summing task with their personal characteristics.

This includes protected characteristics, such as gender or nationality.

The DSS was programmed to **MINIMIZE THE IMPACT** of those variables on an job applicant's grade.

Relying on the DSS therefore ensures you do NOT discriminate across job applicants based on protected characteristics.

You are free to choose according to the grade given by the DSS, or not.

Base: IF Treatment = 2

Intro12A_2.

This is how the DSS ranked characteristics of job applicants in terms of importance.

For each characteristics, we also show you the types of job applicants that the DSS favors.

Variables	Importance	Preferred type
Gender	High	Male
Age	Middle	[35-54]
Nationality	Low	German
Level of education	High	Middle
Income	Middle	High
Interview	Middle	Very Good

Here you see that for the DSS, gender and education are of high importance, age, income and interview are of middle importance and nationality is of low importance. The DSS prefers males, aged 35-54, of German nationality, with a middle education, high level of income and very good interview.

Base: IF Treatment = 1 or 2

Intro12B_2.

IF QRANK1=Irrelevant for all items, do not show below sentence:

If treatment=1: This is how you ranked characteristics of job applicants in terms of importance and what types of job applicants you said you would prefer.

If treatment=2: For comparison, this is how you ranked characteristics of job applicants in terms of importance and what types of job applicants you said you would prefer.

Scripter: show result ranking QRANK2 + sliders with values from QRANK1, below an example for the lay-out.

Variables	Importance	Preferred type
Gender	High	Male
Age	Irrelevant	[56-65]
Nationality	High	Germany
Level of education	Middle	Medium
Income	Middle	High

Interview	<i>Middle</i>	<i>Very Good</i>
-----------	---------------	------------------

For you gender is of (scripter insert qrank1 answer to item1) importance, age is of (scripter insert qrank1 answer to item2) importance, nationality is of (scripter insert qrank1 answer to item 3) importance, education is of (scripter insert qrank1 answer to item 4) importance, income is of (scripter insert qrank1 answer to item 5) importance, and the interview is of (scripter insert qrank1 answer to item 6) importance.

You prefer (scripter insert qrank2 answer to item 1), (scripter insert qrank2 answer to item 2), from (scripter insert qrank2 answer to item 3) with (scripter insert qrank2 answer to item 4) education, (scripter insert qrank2 answer to item 5) level of income and a (scripter insert qrank2 answer to item 6) interview.

Base: IF Treatment = 3

Intro12A_3

This is how the DSS ranked characteristics of job applicants in terms of importance.

For each characteristics, we also show you the types of job applicants that the DSS favors.

Variables	Importance	Preferred type
Gender	<i>Null</i>	
Age	<i>Low</i>	<i>[18-34]</i>
Nationality	<i>Null</i>	
Level of Education	<i>High</i>	<i>Middle</i>
Income	<i>Middle</i>	<i>High</i>
Interview	<i>Low</i>	<i>Very Good</i>

Here you see that for the DSS, education is of high importance, income is of middle importance, age and interview are of low importance and gender and nationality are of null importance. The DSS prefers people aged 18-34, with a middle education, high income and a very good interview.

Base: IF Treatment = 3

Intro12B_3

IF QRank1=Irrelevant for all items, do not show below sentence:

For comparison, this is how you ranked characteristics of job applicants in terms of importance and what types of job applicants you said you would prefer.

Scripter: show result ranking QRANK2 + sliders with values from QRANK1, below an example for the lay-out.

Variables	Importance	Preferred type
Gender	<i>Low</i>	<i>Male</i>
Age	<i>High</i>	<i>[18-34]</i>

Nationality	<i>Moderate</i>	<i>Germany</i>
Level of education	<i>High</i>	<i>Medium</i>
Income	<i>Moderate</i>	<i>Middle</i>
Interview	<i>High</i>	<i>Very Good</i>

For you gender is of (scripter insert qrank1 answer to item1) importance, age is of (scripter insert qrank1 answer to item2) importance, nationality is of (scripter insert qrank1 answer to item 3), education is of (scripter insert qrank1 answer to item 4) importance, income is of (scripter insert qrank1 answer to item 5) importance, and the interview is of (scripter insert qrank1 answer to item 6) importance.

You prefer (scripter insert qrank2 answer to item 1), aged (scripter insert qrank2 answer to item 2), from (scripter insert qrank2 answer to item 3) with (scripter insert qrank2 answer to item 4) education, (scripter insert qrank2 answer to item 5) level of income and a (scripter insert qrank2 answer to item 6) interview.

Base: IF Treatment = 2 or 3

Intro13.

For each decision, we will show you the grade given by the DSS for each job applicant, as well as how each characteristic contributed to the score.

There are 5 grades for job applicants, which can go from dark green to dark red depending on how well the job applicant is predicted to do at the task.

The best grade is ++ which is shown with dark green and means the person is predicted to do very well compared with others. The worst grade is -- which is shown with dark red and means the person is predicted to do very badly compared with others. Grades and colors in between translate intermediate levels of performance.

++	+	=	-	--
----	---	---	---	----

Base: IF Treatment = 2 or 3

Intro13.1 [S]

At this point, we would like to know if you have difficulties seeing the gradation of colours from dark green to dark red above.

- 1.Yes, I have difficulty seeing the gradation of colours above
- 2.No, I have no problem seeing the gradation of colours above

Scripter: If the answer is yes, pls use the colour schema of Intro14 in the rest of the survey

Base: IF Treatment = 2 or 3 and code 1 in Intro13.1

Intro13.2

Thank you for your answer. We will therefore use the following colour scheme.

++	+	=	-	--
----	---	---	---	----

Base: IF Treatment = 2 or 3

Intro14.

You will also see how much each variable contributed to the score of the job applicant.
Scripter: IF Intro13.1=2: Green means a characteristic contributed positively, red means it contributed negatively. White means the characteristic did not influence the grade.

Scripter: IF Intro13.1=1: Blue means a characteristic contributed positively, brown means it contributed negatively. White means the characteristic did not influence the grade.

Scripter: show visual. Do not show numbers for the grade, only the corresponding color. We will provide the colors as grades for each characteristics. If code 1 in intro 13.1 use colour scheme of Intro14

	Job applicant A (Scripter: use gender specific avatar)			Job applicant B (Scripter: use gender specific avatar)		
ID						
Gender	Male	+	+	Female	+	+
Age	18-34	+	+	35-54	--	--
Nationality	German	+	+	Italian	-	-
Level of Education	Middle	++	++	Middle	++	++
Income	High	++	++	High	++	++
Interview	Low	-	-	Low	-	-
Overall grade		++	++		-	-

Base: IF Treatment = 2 or 3

QCheck2 [S]

Please answer the following questions correctly before being allowed to move to the survey.

They have 2 chances per question to answer correctly, to be captured in the data if they needed 1 or 2 attempts per question.

In case of incorrect answer, pls show below warning message: This is not correct. You can check the instructions again via this link (Scripter: add pop-up screen where Intro9/10/11/12/13 are shown again – make sure to only show the relevant info, so filtered on Treatment)

If they still answer the question incorrectly the second time, screenout.

- How was the DSS programmed?
 - Based on data about past job applicants and their performance in the summing task
 - Based on hiring decisions by other HR managers

Scripter: correct answer=1

2. Does the DSS discriminate across job applicants based on protected characteristics such as gender or nationality?
 1. Yes
 2. No

Scripter: correct answer=1 IF Treatment=2

Scripter: correct answer=2 IF Treatment=3

3. Do you have to choose based on the grade given by the DSS?
 1. Yes
 2. No

Scripter: correct answer=2

Base: IF Treatment= 2 or 3

Intro15.

You are now ready to start.

We will show you 12 groups of 2 job applicants.

Please choose your preferred job applicants in each of those groups.

Once this is done we will go to the third part of the survey.

Base: IF Treatment =2 or 3

QT23_1. [Info]

We show you below the characteristics of two job applicants.

	Job applicant A (Scripter: use gender specific avatar)		Job applicant B (Scripter: use gender specific avatar)	
ID				
Gender				
Age				
Nationality				
Level of education				
Income				
Interview				

Please click "Next" to see the grades given by the DSS and choose your preferred job applicant

Scripter: add info from the Excel

Repeat this question 12x and capture as QT23_1 till QT23_12. Pls make sure timestamps are added per screen!

So first show QT23_1, followed by QT2_1 (or QT3_1), and then show QT23_2, followed by QT2_2 (or QT3_2), ...

Randomize QT23_1 till QT23_12 (and same order for QT2_1 till QT2_12 / QT3_1 till QT3_12)

Base: IF Treatment =2

QT2_1. [S]

We now show you how the two job applicants were rated by the DSS.

	Job applicant A (Scripter: use gender specific avatar)		Job applicant B (Scripter: use gender specific avatar)	
ID				
Gender				
Age				
Nationality				
Level of education				
Overall grade				
Income				
Interview				

Please now choose your preferred job applicant.

(show selection button)	(show selection button)
I want to hire A	I want to hire B

Scripter: add info from the Excel

Repeat this question 12x and capture as QT2_1 till QT2_12. Pls make sure timestamps are added per screen!

Base: IF Treatment =3

QT3_1. [S]

We now show you how the two job applicants were rated by the DSS.

	Job applicant A		Job applicant B (Scripter: use gender specific avatar)	
--	-----------------	--	---	--

	(Scripter: use gender specific avatar)			
ID				
Gender				
Age				
Nationality				
Level of education				
Overall grade				
Income				
Interview				

Please now choose your preferred job applicant.

(show selection button)	(show selection button)
I want to hire A	I want to hire B

Scripter: Scripter: add info from the Excel

Repeat this question 12x and capture as QT3_1 till QT3_12. Pls make sure timestamps are added per screen!

Base: All

Intro16.

You are finished with this part of the survey.

We have a few more questions for you.

Please complete the brief questionnaire that follows to finish the study.

You will receive your final payment once you completed the questionnaire.

Please answer truthfully to the best of your abilities.

Base: all respondents

Q1. [O]

What do you think this survey was about?

Base: All

Q2. [O]

Please explain how you could have made better decisions, and what prevented you from doing so.

Base: All

Q3. [Slider]

What was more important for you?

1. Choose job applicants that are the most likely to perform well 2. 3. 4. Making sure that everyone has a fair chance to get selected

Base: All

Q4. [Slider]

In what way did you try to make decisions?

1. I tried to make rational decisions 2. 3. 4. I trusted my instinct more

Base: All

Q5. [Slider]

What was your priority when making choices?

1. Making fast decisions 2 3 4. Making correct decisions

Base: All

Q6. [S]

Overall, how confident were you that you made the right choice?

1. Very confident
2. Fairly confident
3. Not very confident
4. Not at all confident
99. I don't know

Base: All

Q7 [S] (randomize subtopics Honesty / Hard-work, Reliability, Performance)

You had to make choices between men and women in this survey. How would you rate the general attitude and behavior of men and women?

1 Honesty:

1. Men are generally more honest than women
2. Men and women are generally equally honest
3. Women are generally more honest than men

2 Hard-work:

1. Men are generally more hard-working than women
2. Men and women are generally equally hard-working
3. Women are generally more hard-working than men

3 Reliability:

- 1.Men are generally more reliable than women
- 2.Men and women are generally equally reliable
- 3.Women are generally more reliable than men

4 Performance:

- 1.Men generally perform better than women
- 2.Men and women generally perform equally well
- 3.Women generally perform better than men

Base: All

Q8 [S] (randomize subtopics Honesty / Hard-work, Reliability, Performance)

You also had to make choices between Germans and Italians in this survey. How would you rate the general attitude and behavior of Germans and Italians?

1 Honesty:

- 1.Germans are generally more honest than Italians
- 2.Germans and Italians are generally equally honest
- 3.Italians are generally more honest than Germans

2 Hard-work:

- 1.Germans are generally more hard-working than Italians
- 2.Germans and Italians are generally equally hard-working
- 3.Italians are generally more hard-working than Germans

3 Reliability:

- 1.Germans are generally more reliable than Italians
- 2.Germans and Italians are generally equally reliable
- 3.Italians are generally more reliable than Germans

Performance:

- 1.Germans generally perform better than Italians
- 2.Germans and Italians generally perform equally well
- 3.Italians generally perform better than Germans

Base: All

Q9. [S]

In this survey, do you think it was OK to choose a job applicant based on their gender?

1. No, never
2. No, rarely

3. Yes, sometimes
4. Yes, always

Base: All

Q10 [S]

In this survey, do you think it was OK to choose a job applicant based on their nationality?

1. No, never
2. No, rarely
3. Yes, sometimes
4. Yes, always

Base: IF Treatment =2 or 3

Q11 [S]

Did you rely on the DSS when making choices?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: IF Treatment =2 or 3

Q12 [S]

Did you understand how the DSS graded job applicants?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: IF Treatment =2 or 3

Q13 [S]

Was the DSS fair when grading job applicants?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: IF Treatment =2 or 3

Q14 [S]

Was the DSS accurate when grading job applicants?

1. Yes, to a large extent
2. Yes, somewhat

3. No, not really
4. No, not at all

Base: All

Q15. [S]

How long have you been working in Human Resources Management?

1. Less than one year
2. Between one and two years
3. Between three and five years
4. More than five years

Base: All

Q16. [S]

In your current position how many employees report to you?

1. In my current position no one reports to me
2. Between 1 and 5 employees
3. Between 6 and 10 employees
4. Between 11 and 20 employees
5. More than 20 employees
98. I don't know

Base: all respondents

Q17. [S]

How large is the company you work in?

5. Less than 10 employees
6. 10-49 employees
7. 50-249 employees
8. More than 250 employees
100. I don't know

Base: All

Q18. [S]

How often are you dealing with data and statistics in your job?

1. Very often
2. Sometimes
3. Rarely
4. Never

Base: All

Q19. [S]

Scripter: IF Group=1 Employer: How often do you use DSS when hiring at your organisation?

Scripter: IF Group=2 Lender: How often do you use DSS when lending at your organisation?

1. Very often

- 2.Often
- 3.Rarely
- 4.Never
- 98. I don't know

Base: If Q19= 1,2,3

Q20 [O]

Can you give more details on the type of DSS you use?

Base: All

Q21. [S]

Is there diversity in terms of gender, age and ethnicity, disability status, etc... in the workforce at your company?

- 1. Yes, there is a lot of diversity
- 2. Yes, there is some diversity
- 3. No, there is not much diversity
- 4. No, there is no diversity

Base: All

Q22. [S]

Are there policies in place to ensure diversity in the workforce at your company?

- 1. Yes
- 2. No
- 98. I don't know

Base: if Q22=1

Q23 [S]

How well does your organization implement its diversity policies?

- 1. Very well
- 2. Well
- 3. Average
- 4. Badly
- 5. Very badly
- 98. I don't know

Base: All

Intro17.

We are almost at the end of the questionnaire, we now ask you some questions about yourself.

Base: all respondents

D4 [S]

What is the highest level of school you have completed, or the highest degree you have received?

Scripter: insert country specific lists: See Excel D4 Education

Scripter: include recode into ISCED (see Excel D4 Education)

98. I don't know

99. Prefer not to answer

Base: all respondents

D5. [S]

If country=1: Do you have the German nationality?

If country=2: Do you have the Italian nationality?

- 3. Yes
- 4. No

Base: all respondents

D6. [S]

Could you please indicate your household's monthly income (that is, after income taxes have been paid)?

Your total household income includes your own income plus the incomes of all household members who live together with you. The total income includes income from jobs, pensions, social security, interest, dividends, capital gains claimed, profits from businesses, unemployment payments, and all other money you received.

Scripter: if country =1 (Germany)

- 1. Less than 1299 euro
- 2. between 1300 and 1749 euro
- 3. between 1750 and 2199 euro
- 4. between 2200 and 2849 euro
- 5. 2850 euro or more

Scripter: if country = 2 (Italy)

- 1. less than 849 euro
- 2. between 850 and 1249 euro
- 3. between 1250 and 1649 euro
- 4. between 1650 and 2199 euro
- 5. 2200 euro or more

ALL COUNTRIES

98. I don't know

99. Prefer not to answer

Base: all respondents

D7. [S]

What social class do you feel you belong to?

- 4. Working class
- 5. Middle class
- 6. Upper class
- 99. Prefer not to answer

Base: all respondents

QEND.

Thank you for taking part in this study!

We chose one of your decisions at random.

Scripter: show context of decision and person chosen

Make a random selection for the chosen applicant:

If treatment=1: QT1_1 till QT1_12

If treatment=2: QT2_1 till QT2_12

If treatment=3: QT3_1 till QT3_12

The employee you selected classified (Scripter: add number of correct sums = column Real_Scores from the Excel) sums correctly within the 5 minutes allocated for them to do this.

You therefore get (Scripter: $4 * (\text{number of correct sums}) - 100$) points.

In total you will get (Scripter: $\text{above points} * 0.043$) euros, plus the standard participation fee.

Base: all respondents

QCONSENT1.

Would you be interested in taking part in further activities related to this survey (approximately two hours as an online session)?”

You would take part in discussions with other participants and the researchers who designed this survey.

You would be speaking about your experience in this survey and about the use of artificial intelligence in human resource management. You will be compensated for the time you spend participating in these activities.

If you are interested, please click **here** (Scripter: if language = German add hyperlink to <https://ec.europa.eu/eusurvey/runner/QConsentDEHR> ; if language = Italian add hyperlink to <https://ec.europa.eu/eusurvey/runner/QConsentITHR>) to give us your email address.

3 DECIDERS' LENDING EXPERIMENT

I. SAMPLE VARIABLES = information for scripter

Online: background variables need to be foreseen for:

Country	National languages
---------	--------------------

1 Germany	German
-----------	--------

2 Italy	Italian
---------	---------

Treatment:

4. Treatment 1: deciders make decisions on their own
5. Treatment 2: deciders get recommendations from an "efficient" AI
6. Treatment 3: deciders get recommendations from a "fair" AI

Scripter: random assignment to variable Treatment, used least filled method PER COUNTRY AND PER GROUP (Employer / Lender)

II. INTRODUCTION AND SCREENER

SCR1. [S, rotate]

In which of the following sectors are you currently working?

11. Human Resources Management
12. Retail Banking
13. IT Services
14. Communications
15. Wholesale and retail trade
16. Manufacturing
17. Construction
18. Transportation
19. Food services
20. Other

Scripter: create hidden variable GROUP:

1. Employer IF SCR1=1

2. Lender IF SCR1=2

IF SCR1=1 or 3-10: SCREENOUT

Base: All

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

D1. YEAR/MONTH. What is your date of birth?

- ☐ YEAR
- ☐ _1910 1910
- ☐ ...
- ☐ _2015 2015
- ☐ MONTH
- ☐ _1 January
- ☐ _2 February
- ☐ _3 March
- ☐ _4 April

- ☐ _5 May
- ☐ _6 June
- ☐ _7 July
- ☐ _8 August
- ☐ _9 September
- ☐ _10 October
- ☐ _11 November
- ☐ _12 December

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

QUOTAGERANGE [Hidden]. Hidden Question - QUOTAGERANGE "this is a dummy question that will hold age breaks" for the quotas that should be defined by the PM; it CAN be edited and lines can be added to meet survey objectives.

- ☐ _18_24 "18-24",
- ☐ _25_34 "25-34",
- ☐ _35_44 "35-44",
- ☐ _45_54 "45-54",
- ☐ _55_65 "55-65"

[TERMINATE IF LESS THAN 18 OR MORE THAN 65]

[Standard Screener: DO NOT MODIFY OR TRANSLATE]

RESP_AGE [Hidden]. Hidden Question - RESP_AGE "this is a dummy question that will hold age"

Base: all respondents

D2 GENDER_NONBINARY_. Are you...?

- ☐ _1 Male
- ☐ _2 Female
- ☐ _3 Other
- ☐ _4 Prefer not to answer

Scripter: if Gender_Nonbinary = 3 or 4, allocate to least filled category 1 or 2 for quota setting

Base: all respondents

D3

[S]

In which region do you live?

Scripter: insert country specific lists based: See Excel D3 Region

Scripter: include RecodeRegion based on D3 (see Excel D3 Region)

998. I don't know

999. Prefer not to answer

Scripter: IF D3 = 998 OR 999: SCREEN OUT

Base: all respondents

Intro1.

Welcome and thank you for participating in this survey! This study is being conducted by IPSOS on behalf of the Joint Research Centre.

This study requires your complete, undistracted attention. Please remove any distractions that could interfere during the study (e.g. turn off email notifications and chat windows).

This study should take about 20 minutes of your time.

You can follow your progress in the progress bar above.

Please read instructions carefully as you will only be able to proceed after we check that you understood them.

Base: all respondents

Intro2.

As usual, you will receive a participation fee right after completing this study.

In addition to this, you will receive points which will depend on your decisions in this survey and on the decisions of some other participants. The points you earn come on top of your participation fee.

At the end of the survey, the total amount of points you have earned will be converted into real money at the following rate:

$$100 \text{ points} = 4.3 \text{ €}.$$

Please note that, irrespective of your actions, by completing the study you will always at least earn the participation fee.

Base: all respondents

Intro3.

You are a credit analyst at a bank, and you must choose who to lend to.

We recruited loan applicants, coming from Italy and Germany. They differ in terms of age, gender, education, and other variables we will present to you.

They are real people who will be affected by your decisions. Those you lend to will receive a message telling them they were selected and will receive a loan of 100 points.

Those you do not lend to will receive a message telling them they were not selected and they will not receive a loan.

Base: all respondents

Intro4.

You will be shown loan applicants in pairs. You must choose who to lend in each pair.

At the end of the survey, we will look at your decision for one of those 12 pairs. Any one of your decisions may be looked at, so all your decisions are equally important!

The person you lent to in that pair will then receive a loan of 100 points, which they will invest.

Their investment of 100 points allows them to earn 300 points.

They then have to decide how much of the 300 points they want to repay you.

They can choose to repay anything between 0 points and 300 points.

In practice, loan applicants repay 120 points on average, but this can vary between 50 and 150 points depending on the loan applicant.

Scripter: We vary the pool of applicants to cover all recipients, i.e. there are 12 groups of 2.

In the Excel we put the people in two pools (pool 1 and pool 2), each pool counting 12 groups (1 more than planned originally). You show only one pool to each decider, but you randomize what pool people are exposed to (half of deciders see pool 1, half see pool 2) – least filled per country.

On top, you randomize the order of groups they see (least filled per country)

Please make sure to record what pool the person saw and the order in which they saw each group.

We will provide the list of all applicants, put into groups.

Base: all respondents

Intro5.

The more that is paid back by the person you lent to, the more you earn. The following table shows you how much you earn depending on how much the person you chose pays you back.

Repayment	0	50	100	120	150	200	250	300	0	50
Your earning (points)	0	50	100	120	150	200	250	300	0	50
Your earning (euro)	0	2,2	4,3	5,2	6,5	8,6	10,8	12,9	0	2,2

Only the person you choose gets a loan. The other person gets nothing.

Please therefore be careful when choosing who to loan to! This determines how much you and the loan applicants earn!

Base: all respondents

Check1.

Please answer the following questions correctly before being allowed to move to the survey.

They have 2 chances per question to answer correctly, to be captured in the data if they needed 1 or 2 attempts per question.

In case of incorrect answer, pls show below warning message: This is not correct. You can check the instructions again via this link (Scripter: add pop-up screen where Intro1/2/3/4/5 are shown again)

If they still answer the question incorrectly the second time, screenout.

5. What do you have to do?
 1. Invest money for a client
 2. Agree on a loan repayment plan
 3. Decide who to lend to

Scripter: correct answer=3

6. How much does the loan applicant get after investing?
 1. 100 points
 2. 120 points
 3. 300 points

Scripter: correct answer=3

7. What does the loan applicant have to do?

1. Decide how much to give you back
2. Decide how much to invest
3. Decide how much to borrow

Scripter: correct answer= 1

8. How much does a loan applicant earn if you do not lend to him or her?
 1. 100 points
 2. 0 points
 3. 300 points

Base: all respondents

Intro6.

You will get the following information about loan applicants:

- Gender: Male or Female
- Age: 18-34, 35-54, 55-65
- Nationality: German or Italian
- Level of education: Low (up to high school), Middle (up to a bachelor) or High (masters and more)
- Income: Low (less than the median income), Middle, High (top 20%), Unknown
- Interview: Bad, OK, Good, Very Good. This is based on answers to a questionnaire that evaluates a participant's degree of motivation and self-confidence

Scripter: only to be shown for the main fieldwork, not for the pilot:

You can see the questionnaire that was filled by the loan applicants by opening this link [here](#).

Base: all respondents

QTEST1. [S]

How to make a choice?



Scripter: show button below each person, so that the respondent can choose a person

You will get information about the loan applicants.

Here, you see that loan applicant A is a man aged between 18 and 34 from Germany with a high level of education, high level of income and an OK interview. Loan applicant B is a woman aged between 35 and 54 from Italy with middle level of education, middle income and a good interview.

You have to choose ONE person to lend to between the two.

Please have a try by choosing one of the persons in this example.

	Loan applicant A	Loan applicant B
		
ID		
Gender	Male	Female
Age	18-34	35-54
Nationality	German	Italian
Level of education	High	Middle

Income	High	Middle
Interview	OK	Good
	(show selection button)	(show selection button)
	I want to lend to A	I want to lend to B

Base: all respondents

QRANK1. [SGRID]

Please tell us which personal characteristics you think are most important when selecting among loan applicants.

Scripter: Var A, Var B, Var C, to be rated into categories such as "High Importance", "Moderate Importance", "Low Importance", "Irrelevant".

Rows

1. Gender
2. Age
3. Nationality
4. Level of education
5. Income
6. Interview

Column

1. High Importance
2. Moderate importance
3. Low importance
4. Irrelevant

Base: for items in QRANK1 rated 1,2 or 3

QRANK2. [S]

Please now tell us what type of loan applicant you would favour when deciding who to lend to?

[scripter: give this list in the order of importance from QRANK1 and let people click on the favoured type. Do not list variables that were ranked as irrelevant in QRANK1.]

7. Gender
 1. Women
 2. Men
8. Age
 1. 18-34 year old
 2. 35-54 year old
 3. 55-65year old
9. Country
 1. Germany
 2. Italy
10. Level of education
 1. Low
 2. Medium

3. High
11. Income
 - 1.Low
 2. Medium
 3. High
 4. Unknown
12. Interview
 1. Bad
 2. OK
 3. Good
 4. Very Good

Base: IF Treatment =1

Intro8.

You are now ready to start.

We will show you 12 choices to make among 2 loan applicants each time.

Please choose your preferred loan applicants in each of those cases.

Base: IF Treatment 1

QT1_1. [S]

We show you below the characteristics of two loan applicants.

Please now choose your preferred loan applicant.

	Loan applicant A (Scripter: use gender specific avatar)	Loan applicant B (Scripter: use gender specific avatar)
ID		
Gender		
Age		
Nationality		
Level of education		
Income		
Interview		

Please now choose your preferred loan applicant.

(show selection button)	(show selection button)
I want to lend to A	I want to lend to B

Scripter: add info from the Excel

Repeat this question 12x and capture decisions as QT1_1 till QT1_12. Pls make sure timestamps are added per screen!

Randomize QT1_1 till QT1_12

Base: IF Treatment= 2 or 3

Intro9.

You will get support from a *decision support system (DSS)* when making choices between loan applicants.

The DSS analyzed information about past loan applicants and their loan repayment decisions.

Based on this data, the DSS is able to predict how much a loan applicant will pay back.

This is translated into a grade which is shown to you in the last row below information about the loan applicants.

This grade measures how much the loan applicant is expected to pay back compared with others.

For each loan applicant, we also show you how much each variable contributed to the grade.

Base: IF Treatment =2

Intro10.

HOW WAS THE DSS PROGRAMMED?

The DSS correlated the amount paid back by loan applicants with their personal characteristics.

This includes protected characteristics, such as gender or nationality.

The DSS was programmed to **INCLUDE THE IMPACT** of those variables in a loan applicant's grade.

Relying on the DSS may therefore lead you to discriminate across loan applicants based on protected characteristics.

You are free to choose according to the grade given by the DSS, or not.

Base: IF Treatment =3

Intro11.

HOW WAS THE DSS PROGRAMMED?

The DSS correlated the amount paid back by loan applicants with their personal characteristics.

This includes protected characteristics, such as gender or nationality.

The DSS was programmed to **MINIMIZE THE IMPACT** of those variables on a loan applicant's grade.

Relying on the DSS therefore ensures you do NOT discriminate across loan applicants based on protected characteristics.

You are free to choose according to the grade given by the DSS, or not.

Base: IF Treatment = 2

Intro12A_2.

This is how the DSS ranked characteristics of loan applicants in terms of importance.

For each characteristics, we also show you the types of loan applicants that the DSS favors.

Variables	Importance	Preferred type
Gender	High	Male
Age	Middle	[18-34]
Nationality	Low	German
Level of Education	Middle	Middle
Income	Middle	High
Interview	Low	Good

Here you see that for the DSS, gender is of high importance, age, education and income are of middle importance and nationality and interview of low importance. The DSS prefers males, aged 18-34, of German nationality with a middle education, high income and a good interview.

Base: IF Treatment = 1 or 2

Intro12B_2.

IF QRANK1=Irrelevant for all items, do not show below sentence:

If treatment=1: This is how you ranked characteristics of job applicants in terms of importance and what types of job applicants you said you would prefer.

If treatment=2: **For comparison**, this is how you ranked characteristics of loan applicants in terms of importance and

what types of loan applicants you said you would prefer.

Scripter: show result ranking QRANK2 + sliders with values from QRANK1, below an example for the lay-out.

Variables	Importance	Preferred type
Gender	High	Male
Age	Middle	[18-34]
Nationality	Low	German
Level of Education	Middle	Middle
Income	Middle	High
Interview	Low	Good

For you gender is of (scripter insert qrank1 answer to item1) importance, age is of (scripter insert qrank1 answer to item2) importance, nationality is of (scripter insert qrank1 answer to item 3) importance, education is of (scripter insert qrank1 answer to item 4) importance, income is of (scripter insert qrank1 answer to item 5) importance and the interview is of (scripter insert qrank1 answer to item 6) importance.

You prefer (scripter insert qrank2 answer to item 1), aged (scripter insert qrank2 answer to item 2), from (scripter insert qrank2 answer to item 3) with (scripter insert qrank2 answer to item 4) education, (scripter insert qrank2 answer to item 5) level of income and a (scripter insert qrank2 answer to item 6) interview.

Base: IF Treatment = 3

Intro12A_3

This is how the DSS ranked characteristics of loan applicants in terms of importance.

For each characteristics, we also show you the types of loan applicants that the DSS favors.

Variables	Importance	Preferred type
Gender	<i>Null</i>	
Age	<i>Low</i>	<i>[18-34]</i>
Nationality	<i>Null</i>	
Level of Education	<i>Low</i>	<i>Middle</i>
Income	<i>High</i>	<i>High</i>
Interview	<i>Low</i>	<i>Very Good</i>

Here you see that for the DSS, income is of high importance, age, education and interview are of low importance and gender and nationality are of null importance. The DSS prefers people aged 18-34, with a middle education, high income and a very good interview.

Base: IF Treatment = 3

Intro12B_3

IF QRANK1=Irrelevant for all items, do not show below sentence:

For comparison, this is how you ranked characteristics of loan applicants in terms of importance and what types of loan applicants you said you would prefer.

Scripter: show result ranking QRANK2 + sliders with values from QRANK1, below an example for the lay-out.

Variables	Importance	Preferred type
Gender	<i>Null</i>	
Age	<i>Low</i>	<i>[18-35]</i>
Nationality	<i>Null</i>	
Level of Education	<i>Low</i>	<i>Middle</i>
Income	<i>High</i>	<i>High</i>
Interview	<i>Low</i>	<i>Very Good</i>

For you gender is of (scripter insert qrank1 answer to item1) importance, age is of (scripter insert qrank1 answer to item2) importance, nationality is of (scripter insert qrank1 answer to item 3), education is of (scripter insert qrank1 answer to item 4) importance, income is of (scripter insert qrank1 answer to item 5) importance and the interview is of (scripter insert qrank1 answer to item 6) importance.

You prefer (scripter insert qrank2 answer to item 1), aged (scripter insert qrank2 answer to item 2), from (scripter insert qrank2 answer to item 3) with (scripter insert qrank2 answer to item 4) education, (scripter insert qrank2 answer to item 5) level of income and a (scripter insert qrank2 answer to item 6) interview.

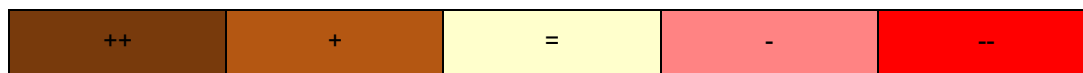
Base: IF Treatment = 2 or 3

Intro13.

For each decision, we will show you the grade given by the DSS for each loan applicant, as well as how each characteristic contributed to the score.

There are 5 grades for loan applicants, which can go from dark green to dark red depending on how much the loan applicant is predicted to pay back.

The best grade is ++ which is shown with dark green and means the person is predicted to pay back a lot compared with others. The worst grade is -- which is shown with dark red and means the person is predicted to pay back very little compared with others. Grades and colors in between translate intermediate levels of back payments.



Base: IF Treatment = 2 or 3

Intro13.1 [S]

At this point, we would like to know if you have difficulties seeing the gradation of colours from dark green to dark red above.

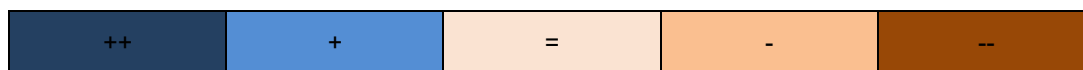
- 1.Yes, I have difficulty seeing the gradation of colours above
- 2.No, I have no problem seeing the gradation of colours above

Scripter: If the answer is yes, pls use the colour schema of Intro14 in the rest of the survey

Base: IF Treatment = 2 or 3 and code 1 in Intro13.1

Intro13.2

Thank you for your answer. We will therefore use the following colour scheme.



Base: IF Treatment = 2 or 3

Intro14.

You will also see how much each variable contributed to the score of the loan applicant.

Scripter: IF Intro13.1=2: Green means a characteristic contributed positively, red means it contributed negatively. White means the characteristic did not influence the grade.

Scripter: IF Intro13.1=1: Blue means a characteristic contributed positively, brown means it contributed negatively. White means the characteristic did not influence the grade.

Scripter: show visual. Do not show numbers for the grade, only the corresponding color. We will provide the colors as grades for each characteristics. If code 1 in intro 13.1 use colour scheme of Intro14

	Loan applicant A (Scripter: use gender specific avatar)			Loan applicant B (Scripter: use gender specific avatar)		
ID						
Gender	Male	+	+	Female	+	+
Age	18-34	+	+	35-54	--	--
Nationality	German	+	+	Italian	-	-
Level of Education	Middle	++	++	Middle	++	++
Income	High	++	++	High	++	++
Interview	Low	-	-	Low	-	-
Overall grade		++	++		-	-

Base: IF Treatment = 2 or 3

QCheck2 [S]

Please answer the following questions correctly before being allowed to move to the survey.

They have 2 chances per question to answer correctly, to be captured in the data if they needed 1 or 2 attempts per question.

In case of incorrect answer, pls show below warning message: This is not correct. You can check the instructions again via this link (Scripter: add pop-up screen where Intro9/10/11/12/13 are shown again – make sure to only show the relevant info, so filtered on Treatment)

If they still answer the question incorrectly the second time, screenout.

3. How was the DSS programmed?

1. Based on data about past loan applicants and their loan repayment decisions
2. Based on lending decisions by other loan managers

Scripter: correct answer=1

4. Does the DSS discriminate across loan applicants based on protected characteristics such as gender or nationality?

4. Yes
5. No

Scripter: correct answer=1 IF Treatment=2

Scripter: correct answer=2 IF Treatment=3

6. Do you have to choose based on the grade given by the DSS?

1. Yes

2. No

Scripter: correct answer=2

Base: IF Treatment= 2 or 3

Intro15.

You are now ready to start.

We will show you 12 groups of 2 loan applicants.

Please choose your preferred loan applicants in each of those groups.

Once this is done we will go to the third part of the survey.

Base: IF Treatment =2 or 3

QT23_1. [Info]

We show you below the characteristics of two loan applicants.

	Loan applicant A (Scripter: use gender specific avatar)		Loan applicant B (Scripter: use gender specific avatar)	
ID				
Gender				
Age				
Nationality				
Level of education				
Income				
Interview				

Please click "Next" to see the grades given by the DSS and choose your preferred loan applicant

Scripter: add info from the Excel

Repeat this question 12x and capture as QT23_1 till QT23_12. Pls make sure timestamps are added per screen!

So first show QT23_1, followed by QT2_1 (or QT3_1), and then show QT23_2, followed by QT2_2 (or QT3_2), ...

Randomize QT23_1 till QT23_12 (and same order for QT2_1 till QT2_12 / QT3_1 till QT3_12)

Base: IF Treatment =2

QT2_1. [S]

We now show you how the two loan applicants were rated by the DSS.

	Loan applicant A (Scripter: use gender specific avatar)		Loan applicant B (Scripter: use gender specific avatar)	
ID				
Gender				
Age				
Nationality				
Level of education				
Overall grade				
Income				
Interview				

Please choose your preferred loan applicant.

(show selection button)	(show selection button)
I want to lend to A	I want to lend to B

Scripter: add info from the Excel

Repeat this question 12 x and capture as QT2_1 till QT2_12. Pls make sure timestamps are added per screen!

Base: IF Treatment =3

QT3_1. [S]

We now show you how the two loan applicants were rated by the DSS.

	Loan applicant A (Scripter: use gender specific avatar)		Loan applicant B (Scripter: use gender specific avatar)	
ID				
Gender				
Age				

Nationality				
Level of education				
Overall grade				
Income				
Interview				

Please choose your preferred loan applicant.

(show selection button)	(show selection button)
I want to lend to A	I want to lend to B

Scripter: Scripter: add info from the Excel

Repeat this question 12x and capture as QT3_1 till QT3_12. Pls make sure timestamps are added per screen!

Base: All

Intro16.

You are finished with this part of the survey.

We have a few more questions for you.

Please complete the brief questionnaire that follows to finish the study.

You will receive your final payment once you completed the questionnaire.

Please answer truthfully to the best of your abilities.

Base: all respondents

Q1. [O]

What do you think this survey was about?

Base: All

Q2. [O]

Please explain how you could have made better decisions, and what prevented you from doing so.

Base: All

Q3. [Slider]

What was more important for you?

1.Choose loan applicants that are the most likely to pay back a lot
sure that everyone has a fair chance to get a loan

2.

3.

4.Making

Base: All

Q4. [Slider]

In what way did you try to make decisions?

1. I tried to make rational decisions 2. 3. 4. I trusted my instinct more

Base: All

Q5. [Slider]

What was your priority when making choices?

1. Making fast decisions 2 3 4. Making correct decisions

Base: All

Q6. [S]

Overall, how confident were you that you made the right choice?

- 5. Very confident
- 6. Fairly confident
- 7. Not very confident
- 8. Not at all confident
- 99. I don't know

Base: All

Q7 [S] (randomize subtopics Honesty / Hard-work, Reliability, Performance)

You had to make choices between men and women in this survey. How would you rate the general attitude and behavior of men and women?

1 Honesty:

- 1.Men are generally more honest than women
- 2.Men and women are generally equally honest
- 3.Women are generally more honest than men

2 Hard-work:

- 1.Men are generally more hard-working than women
- 2.Men and women are generally equally hard-working
- 3.Women are generally more hard-working than men

3 Reliability:

- 1.Men are generally more reliable than women
- 2.Men and women are generally equally reliable
- 3.Women are generally more reliable than men

4 Performance:

1. Men generally perform better than women
2. Men and women generally perform equally well
3. Women generally perform better than men

Base: All

Q8 [S] (randomize subtopics Honesty / Hard-work, Reliability, Performance)

You also had to make choices between Germans and Italians in this survey. How would you rate the general attitude and behavior of Germans and Italians?

1 Honesty:

1. Germans are generally more honest than Italians
2. Germans and Italians are generally equally honest
3. Italians are generally more honest than Germans

2 Hard-work:

1. Germans are generally more hard-working than Italians
2. Germans and Italians are generally equally hard-working
3. Italians are generally more hard-working than Germans

3 Reliability:

1. Germans are generally more reliable than Italians
2. Germans and Italians are generally equally reliable
3. Italians are generally more reliable than Germans

Performance:

1. Germans generally perform better than Italians
2. Germans and Italians generally perform equally well
3. Italians generally perform better than Germans

Base: All

Q9. [S]

In this survey, do you think it was OK to choose a loan applicant based on their gender?

1. No, never
2. No, rarely
3. Yes, sometimes
4. Yes, always

Base: All

Q10 [S]

In this survey, do you think it was OK to choose a loan applicant based on their nationality?

1. No, never
2. No, rarely
3. Yes, sometimes
4. Yes, always

Base: IF Treatment =2 or 3

Q11 [S]

Did you rely on the DSS when making choices?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: IF Treatment =2 or 3

Q12 [S]

Did you understand how the DSS graded loan applicants?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: IF Treatment =2 or 3

Q13 [S]

Was the DSS fair when grading loan applicants?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: IF Treatment =2 or 3

Q14 [S]

Was the DSS accurate when grading loan applicants?

1. Yes, to a large extent
2. Yes, somewhat
3. No, not really
4. No, not at all

Base: All

Q15. [S]

How long have you been working in Retail Banking?

1. Less than one year
2. Between one and two years
3. Between three and five years
4. More than five years

Base: All

Q16. [S]

In your current position how many employees report to you?

6. In my current position no one reports to me
7. Between 1 and 5 employees
8. Between 6 and 10 employees
9. Between 11 and 20 employees
10. More than 20 employees
99. I don't know

Base: all respondents

Q17. [S]

How large is the company you work in?

9. Less than 10 employees
10. 10-49 employees
11. 50-249 employees
12. More than 250 employees
101. I don't know

Base: All

Q18. [S]

How often are you dealing with data and statistics in your job?

1. Very often
2. Sometimes
3. Rarely
4. Never

Base: All

Q19. [S]

Scripter: IF Group=1 Employer: How often do you use DSS when hiring at your organisation?

Scripter: IF Group=2 Lender: How often do you use DSS when lending at your organisation?

1. Very often

- 2.Often
- 3.Rarely
- 4.Never
- 98. I don't know

Base: If Q19= 1,2,3

Q20 [O]

Can you give more details on the type of DSS you use?

Base: All

Q21. [S]

Is there diversity in terms of gender, age and ethnicity, disability status, etc... in the workforce at your company?

- 1. Yes, there is a lot of diversity
- 2. Yes, there is some diversity
- 3. No, there is not much diversity
- 4. No, there is no diversity

Base: All

Q22. [S]

Are there policies in place to ensure diversity in the workforce at your company?

- 1. Yes
- 2. No
- 98. I don't know

Base: if Q22=1

Q23 [S]

How well does your organization implement its diversity policies?

- 1. Very well
- 2. Well
- 3. Average
- 4. Badly
- 5. Very badly
- 98. I don't know

Base: All

Intro17.

We are almost at the end of the questionnaire, we now ask you some questions about yourself.

Base: all respondents

D4 [S]

What is the highest level of school you have completed, or the highest degree you have received?

Scripter: insert country specific lists: See Excel D4 Education

Scripter: include recode into ISCED (see Excel D4 Education)

98. I don't know

99. Prefer not to answer

Base: all respondents

D5. [S]

If country=1: Do you have the German nationality?

If country=2: Do you have the Italian nationality?

5. Yes

6. No

Base: all respondents

D6. [S]

Could you please indicate your household's monthly income (that is, after income taxes have been paid)?

Your total household income includes your own income plus the incomes of all household members who live together with you. The total income includes income from jobs, pensions, social security, interest, dividends, capital gains claimed, profits from businesses, unemployment payments, and all other money you received.

Scripter: if country = 1 (Germany)

1. Less than 1299 euro
2. between 1300 and 1749 euro
3. between 1750 and 2199 euro
4. between 2200 and 2849 euro
5. 2850 euro or more

Scripter: if country = 2 (Italy)

1. less than 849 euro
2. between 850 and 1249 euro
3. between 1250 and 1649 euro
4. between 1650 and 2199 euro
5. 2200 euro or more

ALL COUNTRIES

98. I don't know

99. Prefer not to answer

Base: all respondents

D7. [S]

What social class do you feel you belong to?

- 7. Working class
- 8. Middle class
- 9. Upper class
- 99. Prefer not to answer

Base: all respondents

QEND.

Thank you for taking part in this study!

We chose one of your decisions at random.

Scripter: show context of decision and person chosen

Make a random selection for the chosen applicant:

If treatment=1: QT1_1 till QT1_12

If treatment=2: QT2_1 till QT2_12

If treatment=3: QT3_1 till QT3_12

The loan applicant you selected chose to repay (Scripter: add repayment = column Real_Scores from the Excel) points.

You therefore get (Scripter: Real_Scores) points.

In total you will get (Scripter: above points * 0.043) euros, plus the standard participation fee.

Base: all respondents

QCONSENT1.

Would you be interested in taking part in further activities related to this survey (approximately two hours as an online session)?"

You would take part in discussions with other participants and the researchers who designed this survey.

You would be speaking about your experience in this survey and about the use of artificial intelligence in retail banking. You will be compensated for the time you spend participating in these activities.

If you are interested, please click **here** (Scripter: if language= German add hyperlink to <https://ec.europa.eu/eusurvey/runner/QConsentDEFIN> ; if language Italian add hyperlink to <https://ec.europa.eu/eusurvey/runner/QConsentITFIN>) to give us your email address.

Scripter insert: image showing people brainstorming