Analysing tasks and wages

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Analysing tasks and wages

- Benefits of (new sources) of Individual level Microdata in the labour market matching process

- Main elements of the matching: Skills, Tasks, Wages

- TASK: work activity that produces output.
- SKILL: worker's stock of capabilities for performing various tasks.
- Workers apply their skills to tasks in exchange for WAGES (Autor, D. 2013 The "task approach" to labour markets: an overview)

Analysing tasks and wages

- Can we (use WI data to) measure tasks' wages?
- Can tasks explain wages differences?
  - Of similar workers
  - Gender gap

Analysing tasks and wages

TASKS

WAGES

University of Amsterdam
Amsterdam Institute for Advanced labour Studies

What do workers do?

Measuring the intensity and market value of tasks in jobs

Kea Tijdens and Stefano Visintin

WP 161
February 2016

Analysing tasks and wages

Your tasks

In your current job, how often do you carry out the following tasks?

	Never	Yearly	Monthly	Weekly	Daily
Providing administrative, strategic planning and operational support, research and advice to senior management on matters such as the management of building facilities and administrative services	○	○	○	○	○
Developing and managing the organization's administrative and physical resources	○	○	○	○	○
Developing and implementing administrative and procedural statements and guidelines for use by staff in the organization	○	○	○	○	○
Analyzing complex resource management issues and initiatives that affect the organization, and preparing associated reports, correspondence and submissions	○	○	○	○	○
Providing information and support for the preparation of financial reports and budgets	○	○	○	○	○
Leading, managing and developing administrative staff to ensure smooth business operations and the provision of accurate and timely information	○	○	○	○	○
Representing the enterprise or organization in negotiations, and at conventions, seminars, public hearings and forums	○	○	○	○	○
Establishing and managing budgets, controlling expenditure and ensuring the efficient use of resources	○	○	○	○	○
Planning and directing daily operations	○	○	○	○	○
Overseeing the selection, training and performance of staff	○	○	○	○	○

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- 13 countries
- 427 occupations ISCO08 4 digits
- 3237 tasks
- Begins November 2013 (ongoing)
- 11/2013 – 04/2016 approx. 70K records

Task data + Wage Indicator

⇒TASK WAGES

- Hourly salary received to perform a task
- Median of the (gross hourly) salary perceived by workers performing the task intensively (daily or weekly basis)

- Country level (the Netherlands)
- 6800 individuals
- 231 (out of 412) occupations
- 933 (out of 3236) tasks

Analysing tasks and wages

Task BEST PAID TASKS	Task code	Median value	Average value
Leading and managing the activities of research and development staff	122303	35.36	33.82
Consulting with engineering staff to evaluate interface between hardware and software	251203	33.84	32.50
Representing the organization at official occasions and board meetings in negotiations at conventions seminars public hearings and forums	112009	33.68	35.90
Planning and directing daily operations	122306	33.20	32.85
Directing the selection and installation of ICT resources and the provision of user training	133003	33.20	29.68
Conducting research and improving or developing concepts instruments theories and operational methods related to chemistry	211301	32.86	35.59
Directing software programming and development of documentation	251206	32.71	32.13
Representing the enterprise or organization in dealings with outside bodies	121108	32.70	36.42
Planning the overall research and development programme of an enterprise or organization specifying goals and budgetary requirements	122302	32.33	31.28
Researching analyzing and evaluating requirements for software applications and operating systems	251201	32.29	31.15
...	...	...	...

Task	Task code	Median value	Average value
LEAST PAID TASKS			
...	...	...	...
Washing cutting measuring and mixing foods for cooking	941102	5.93	6.72
Cleaning kitchens food preparation areas and service areas	941201	5.75	9.14
Noting what has been sold and collecting goods needed from the stockroom	933405	5.09	6.24
Receiving opening unpacking and inspecting for damage merchandise from manufacturer or distributor	933408	5.09	6.76
Directing customers to location of articles sought	933407	4.26	5.81
Removing goods with past due use-by dates	933403	4.12	6.06
Filling shelves with goods ensuring goods with the earliest use-by dates are at the front of shelves	933402	4.11	4.97
Maintaining shelf order by removing stock belonging in a different location	933404	4.11	5.72
Obtaining articles for customers from shelf or stockroom	933406	4.11	5.64
Placing goods neatly in bins and on racks and stacking bulky goods on floors	933401	3.61	5.86

WI data

- Can produce a trustworthy measure of tasks' wages

Tasks and gender pay gap

By
Kea Tijdens
Stephanie Steinmetz
Stefano Visintin

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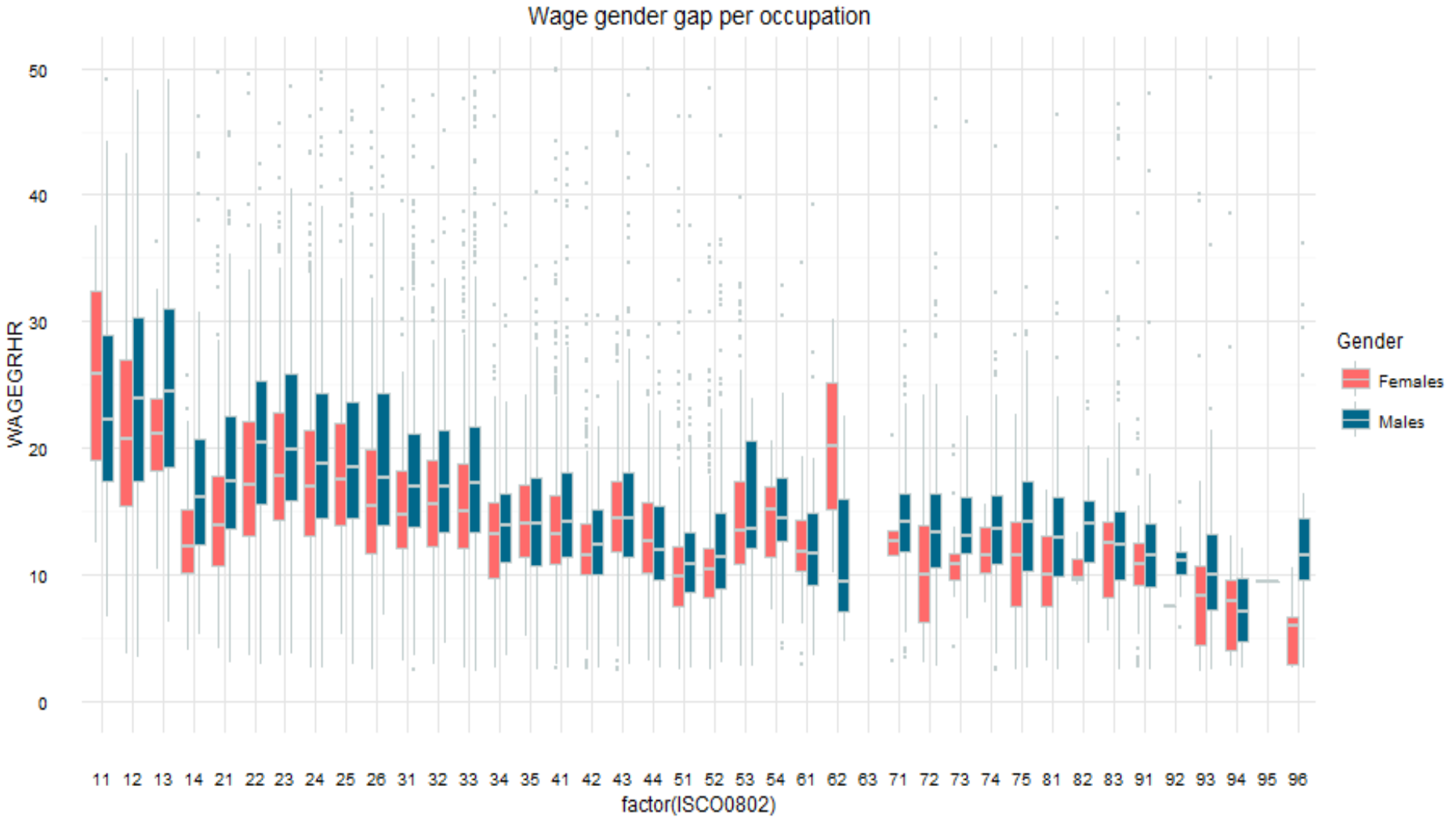
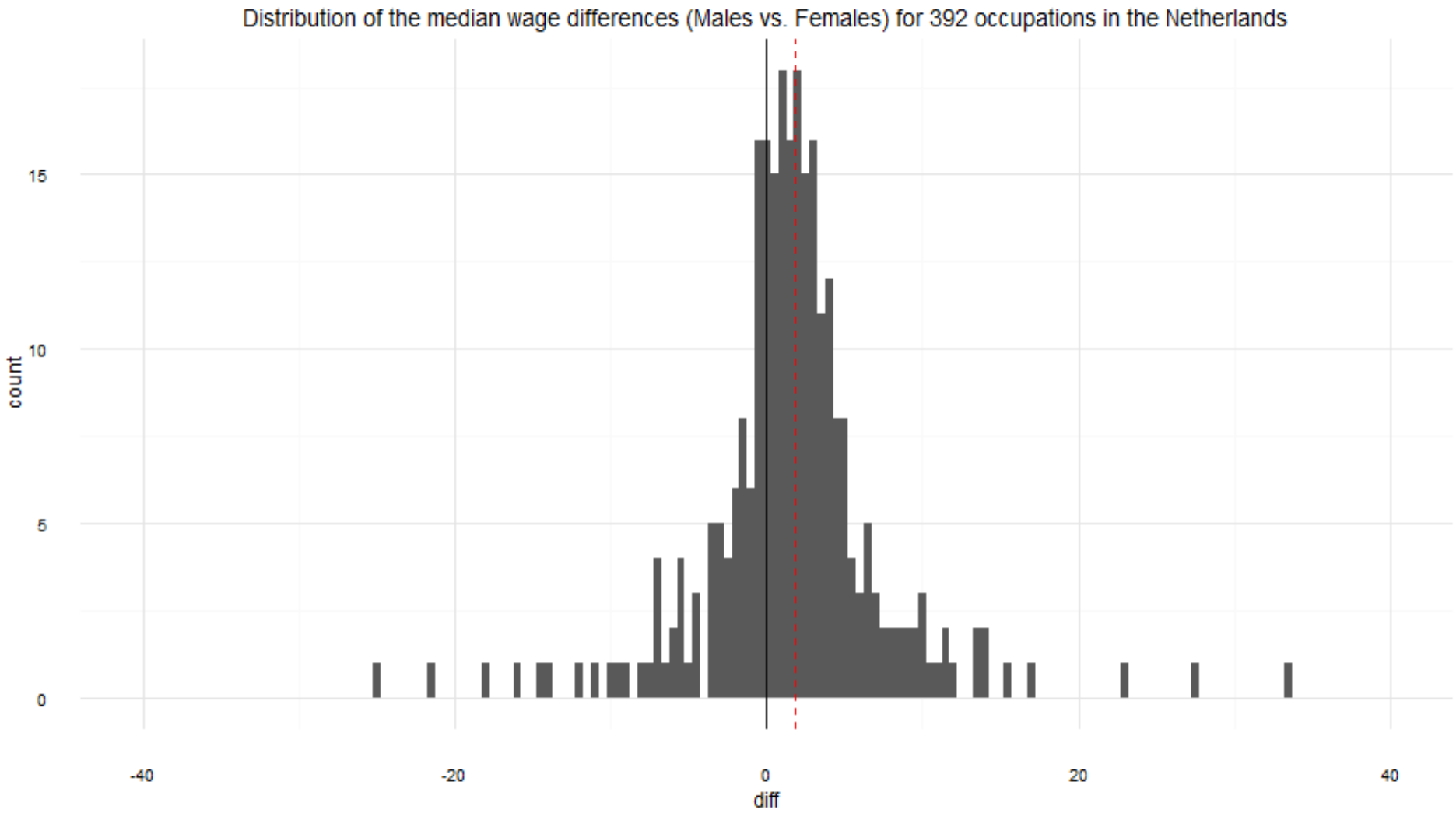
Within occupation gender pay gap



Within occupation gender pay gap



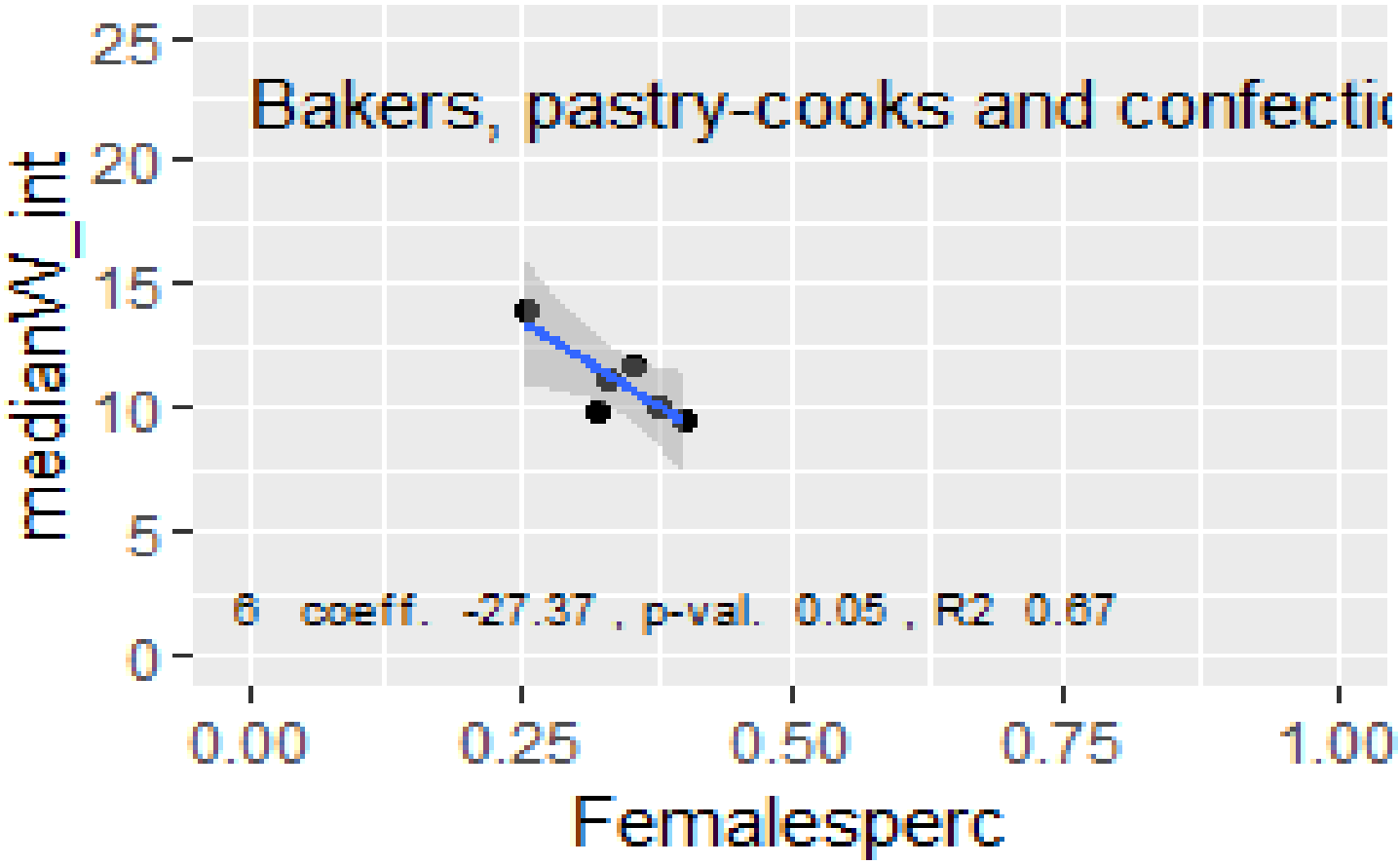
There is a within-occupation gender pay gap

- Or is it because women are paid less to perform the same task?
- Is it because women perform less paid tasks within an occupation (task segregation)?

The task segregation hypothesis: women perform less paid tasks

- Descriptive analysis strategy
- Per each task with at least 100 respondent (625), we compute
  - the task wage and
  - the % of females engaged intensively in the task.
- Then we observe at occupation level (92) a scatterplot with the relation between these two variables.

Analysing tasks and wages



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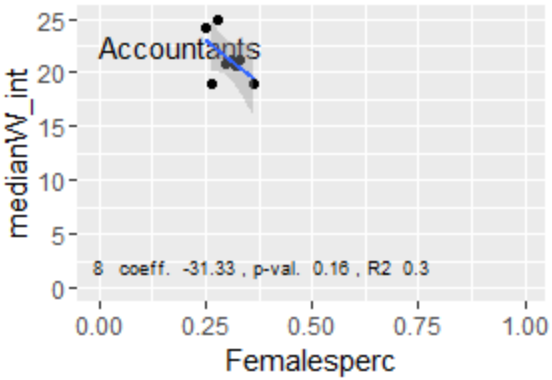

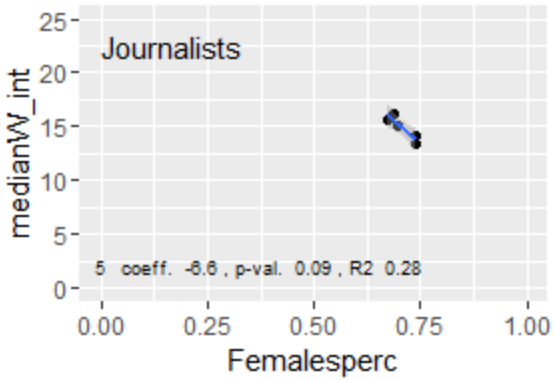

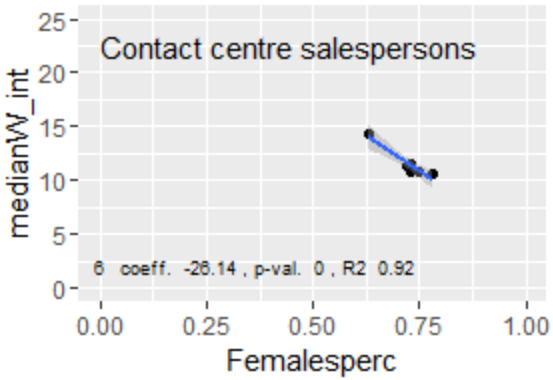

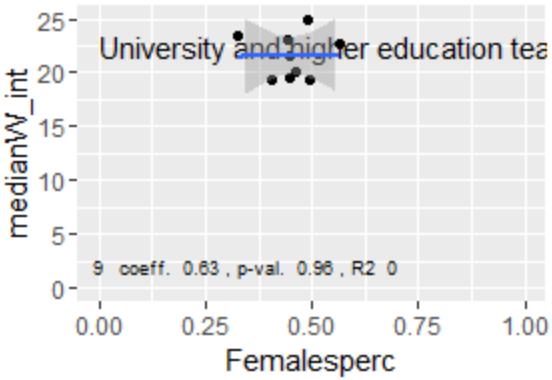

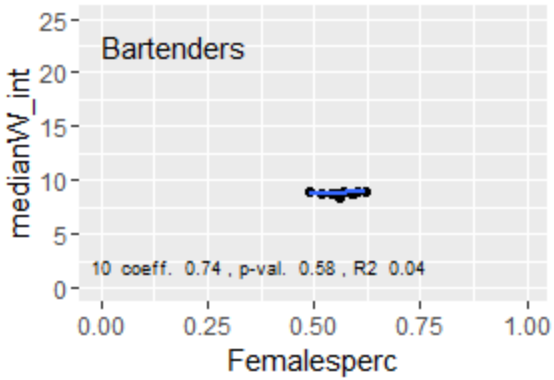

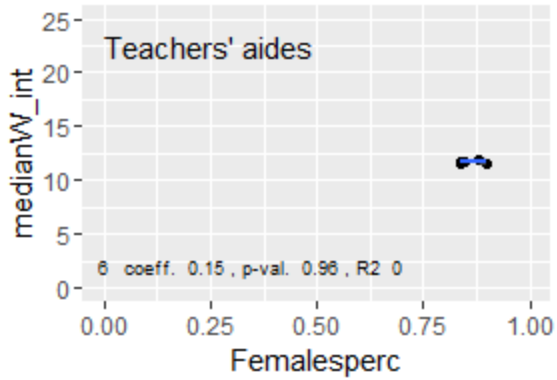

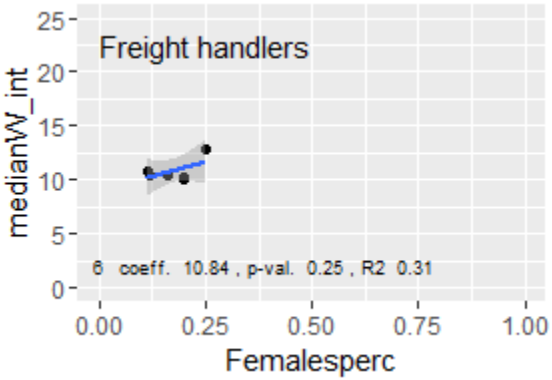

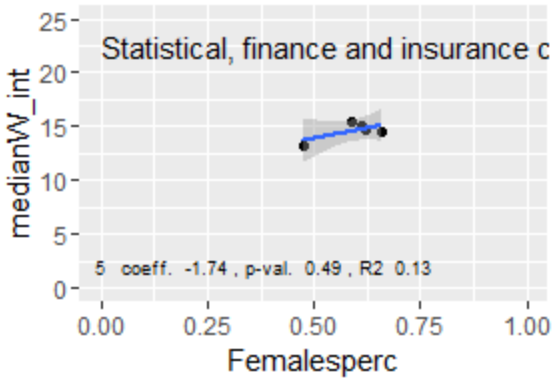

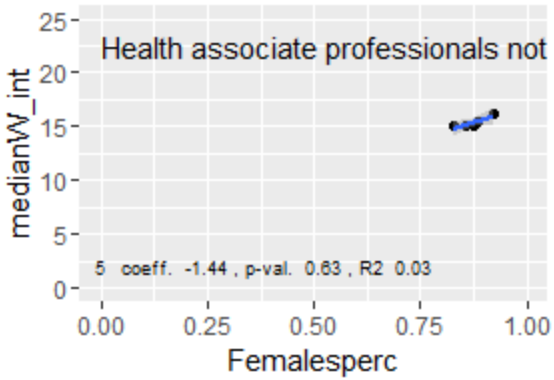

Occupation	Coeff.	p-val		R2
Security guards	-50.36	0	***	0.92
Chefs	-28.77	0.04	**	0.43
Bakers, pastry-cooks and confectionery makers	-27.37	0.05	**	0.67
Product graders and testers (excluding foods and beverages)	-27.37	0.05	**	0.67
Contact centre salespersons	-26.14	0	***	0.92
Buyers	-16.71	0	***	0.67
Systems analysts	-16.02	0.06	*	0.53
Applications programmers	-16.02	0.06	*	0.53
Software and applications developers and analysts not elsewhere classified	-16.02	0.06	*	0.53
Systems administrators	-16.02	0.06	*	0.53
Administrative and executive secretaries	-12.87	0.02	**	0.62
General office clerks	-12.09	0	***	0.94
Business services and administration managers not elsewhere classified	-10.17	0	***	0.76
Physiotherapists	-9.57	0.07	*	0.52
Social work and counselling professionals	-6.6	0.09	*	0.28
Journalists	-6.6	0.09	*	0.28
Electrical engineering technicians	-6.6	0.09	*	0.28
Primary school teachers	-3.69	0.08	*	0.33
Teaching professionals not elsewhere classified	-3.69	0.08	*	0.33
Information and communications technology user support technicians	-3.65	0.07	*	0.46
Restaurant managers	-3.34	0.01	***	0.6
Kitchen helpers	7.8	0.08	*	0.57
Car, taxi and van drivers	12.23	0.03	**	0.59
Shop keepers	13.91	0.07	*	0.53
Shop supervisors	14.9	0.08	*	0.43
Shop sales assistants	14.9	0.08	*	0.43
Web technicians	18.05	0.02	**	0.67
Domestic cleaners and helpers	28.05	0.05	**	0.57
Cleaners and helpers in offices, hotels and other establishments	28.05	0.05	**	0.57
Child care workers	58.66	0.04	**	0.53

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WI data

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- Can contribute to explain wages differences to a larger extent
- Seems to be useful when explaining gender pay gap

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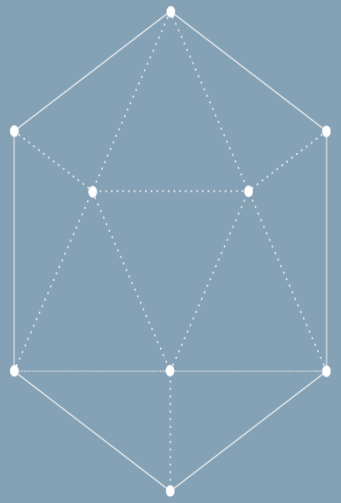
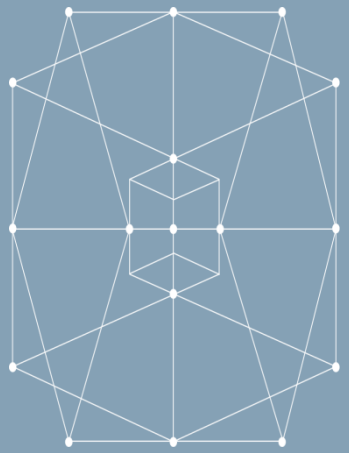
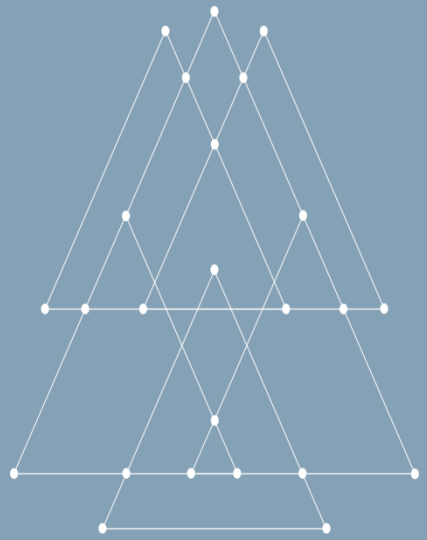
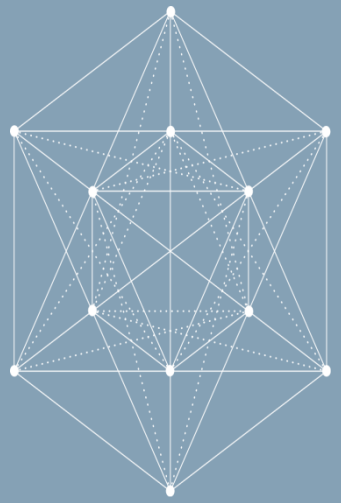

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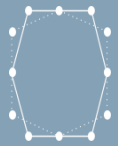
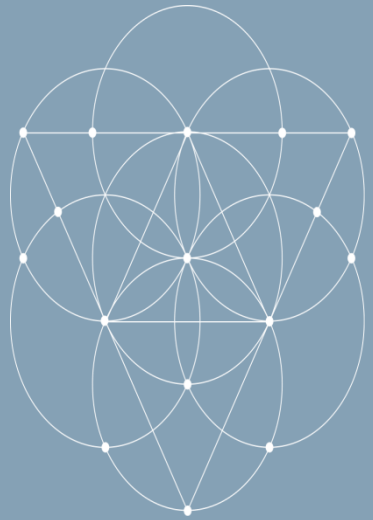
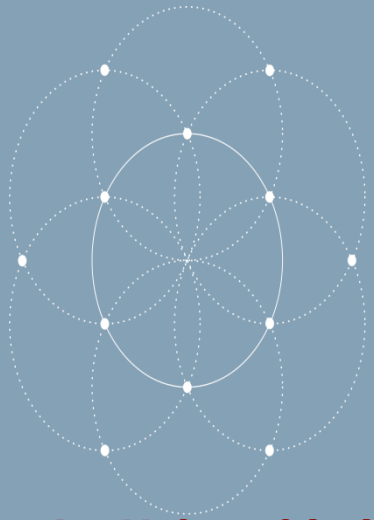
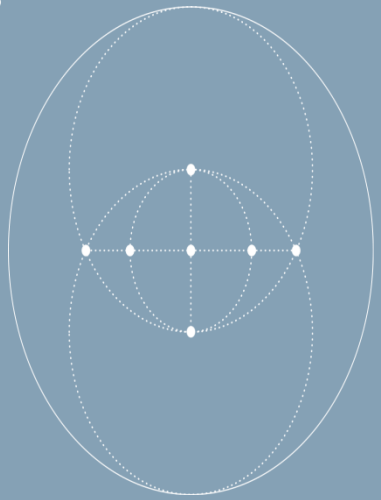
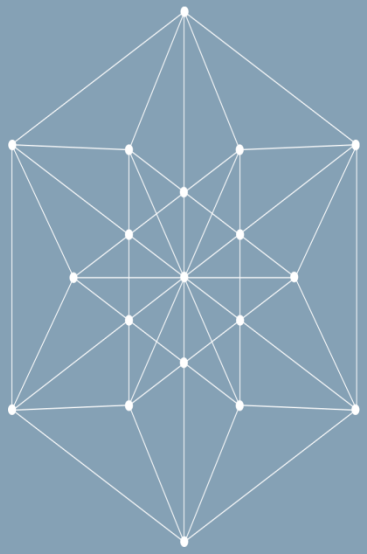

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