

Session 3a.1: Gender Aspects in Trade and How to Measure Them

Astana, Kazakhstan

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Outline

- Objectives for measuring gender aspects in trade
- Conceptual description of gender-in-trade statistics
- Main concepts used
- Country case studies

Economic aspects of gender equality

Trade and trade policy affect gender equality

- Need to develop gender-responsive trade policies
- The interactions are often complex and country-specific

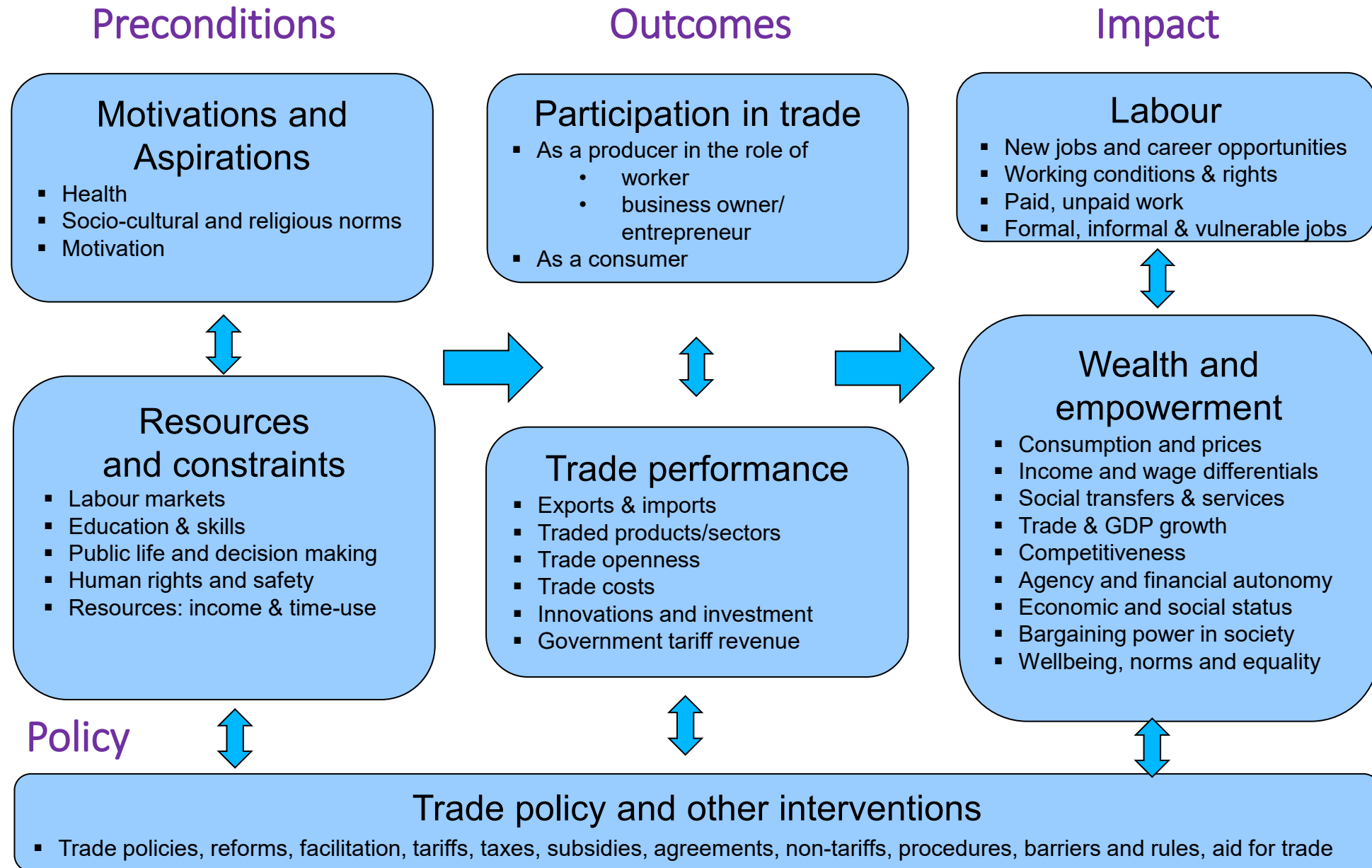
Women's economic empowerment on the global agenda

- Beijing Platform for Action (1995) – gender & economic stats
- The 2030 Agenda (2015) – a goal & a cross-sectional issue
- The Addis Ababa Action Agenda (2015) – a trade & gender link

Buenos Aires Declaration on Trade and Women's Economic Empowerment (2017)

- A call for gender-focused statistics related to trade

Conceptual framework for measuring trade and gender



Gender and trade statistics: structure

Gender and Trade

Formal trade (incorporated
businesses)
(90%+)

Informal (cross-border) trade
(households/individuals)

Trade in Goods
(80%)

Trade in services
(20%)

Gender analysis of Goods Trade by Enterprise Characteristics (TEC)

Trade and gender statistics: measurement approaches

Two general approaches in terms of data collection:

1. Use of available data:

- Macroeconomic estimates (“top-down” approach): Canada, New Zealand, Finland
- Use of enterprise-level data, microlinking (“bottom-up” approach): e.g. Finland, New Zealand, Georgia

2. Data collection through specialized (ad hoc) surveys of enterprises (e.g., Uruguay, Chile) and individuals (e.g., West Africa cross-border study by WB/GIZ)

Question: What are the advantages and disadvantages of the two approaches to trade and gender analysis?

Goods trade statistics (enterprises) and gender

- Trade in goods – globally 80% of trade value
- Trade performed mostly by incorporated businesses (there are exceptions)
- Customs agencies and statistical offices – main data producers
- Complete enumeration of trade transactions by enterprises and commodity groups
- Possibility for time-series analysis of enterprise-level data

Non-trade data sources

Non-trade data sources	Variables
The Statistical Business Register (SBR)	<ul style="list-style-type: none">- Enterprise name and ID- Address- Legal form of business organization
Structural Business Statistics (SBS) surveys	<ul style="list-style-type: none">- Registration date(s)- Active/non-active status- Area of economic activity (ICIS)
Structure of Earnings surveys	<ul style="list-style-type: none">- Enterprise size- Turnover
Tax administration records	<ul style="list-style-type: none">- Employment*- Earnings*- Skill levels of employees*- Attained education level of employees*- Investments- Ownership shares*- Foreign/domestic ownership

Gender-in-trade and enterprise statistics: dimensions and indicators

Dimensions	Basic indicators	Further Disaggregations
Employment	Share of women in employment	- Company characteristics (size, age, geographical location, foreign/domestic ownership, male/female ownership, etc.)
Earnings	Gender pay gap	- Employee skills (managers, high-, medium-, low-skill workers) - Educational attainment of employees
Ownership of resources	Share of women owners	- Other employee characteristics (age, length of service, types of jobs, etc.)

Gender and trade: basic indicators (labor)

Women -to-men employment ratio:

$$\frac{\textit{Number of women employees in trade sector}}{\textit{Number of male employees in trade sector}}$$

Gender pay gap:

$$\frac{\textit{Men's average wages} - \textit{Women's average wages}}{\textit{Men's average wages}} \times 100\%$$

Gender and trade: basic indicators

Enterprise ID	No. of male employees	No. of female employees	Men's average wages (\$)	Women's average wages (\$)
1111	170	80	2000	1600
2222	30	40	1000	1000
3333	1200	500	1100	1000

Women's share in employment?

Gender pay gap?

Gender and trade: basic indicators (answ.)

Enterprise ID	No. of male employees	No. of female employees	Men's average wages (\$)	Women's average wages (\$)
1111	170	80	2000	1600
2222	30	40	1000	1000
3333	1200	500	1100	900

Women's share in employment: $(80+40+500)/(170+30+1200)$
 $= 620/1400 = 44.2\%$

Men's average wages = $(170*2000+30*1000+1200*1100)/1400 = \1207

Women's average wages = $(80*1600+40*1000+500*900)/620 = \$ 997$

Gender pay gap = $(1207 - 997)/1207 = 17.4\%$

Gender and trade: ownership indicators (1)

Simple share of women-owners:

$$\frac{\textit{Number of women-owners of trading companies}}{\textit{Number of total owners of trading companies}}$$

Question: while the number of women owners/entrepreneurs is important, what are the drawbacks of this indicator?

Gender and trade: ownership indicators (2)

Share of women-owned enterprises (*enterprises in which more than 50% is owned by women*):

$$\frac{\text{Number of women-owners of trading companies}}{\text{Number of total owners of trading companies}}$$

Question: if in 1000 trading companies there are 500 women-owned enterprises, can we speak of gender equality in terms of ownership?

Gender and trade: ownership indicators (3)

Share of women-owned enterprises, weighted by enterprise assets:

$$\frac{\textit{Value of assets owned by women in trading companies}}{\textit{Total value of trading companies}}$$

Note: In case the data on assets is not available, alternative variables such as the enterprise's output or trade turnover can be used to account for enterprise size.

Gender and trade: differentiated indicators

- Basic indicators can be analyzed by various disaggregations in order to:
 - Gain additional insights about the gender aspects
 - Estimate the impact of various factors on the basic indicators, e.g., the impact on gender pay gap by skill levels or industry groups

- Hence, the disaggregations may include
 - i) the breakdown by companies: by trading status, by industry and industry groups, by origin of company ownership, etc.
 - ii) the breakdown by employees and owners: by skill levels, by educational attainment, by gender-specific ownership shares, etc.

Conclusions: gender and trade and enterprise-level data

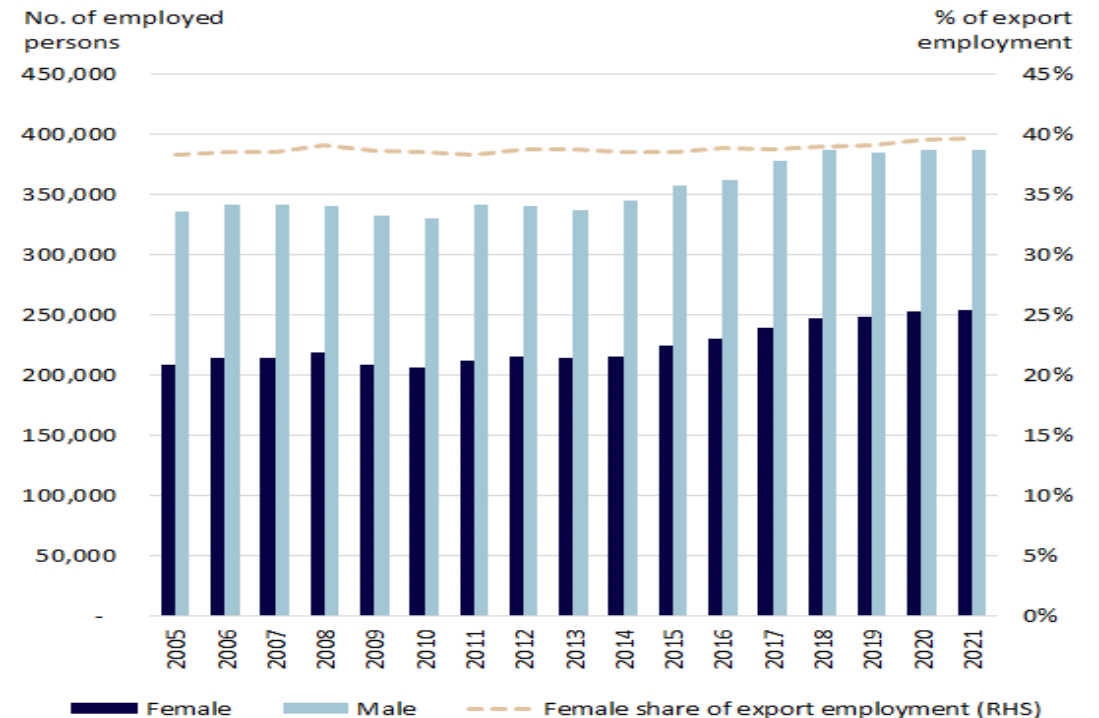
- Merging of trade and non-trade data at the enterprise level (microlinking) allows for flexibility in gender analysis
- Microlinking prevents additional burden on respondents and budgets
- Enterprise data from different sources/surveys enrich gender-in-trade statistical analysis

Gender in trade: Case Studies

New Zealand: Macro analysis and microlinking

- Two complementing approaches used for export analysis:
 - “top down” approach from national input-output tables and employment data
 - “bottom up” approach using firm-level findings from administrative data:

1. The employment share of women slightly increased to 40%. Women still underrepresented in export sector – national average share equals 47%



New Zealand: Macro analysis and microlinking (2)

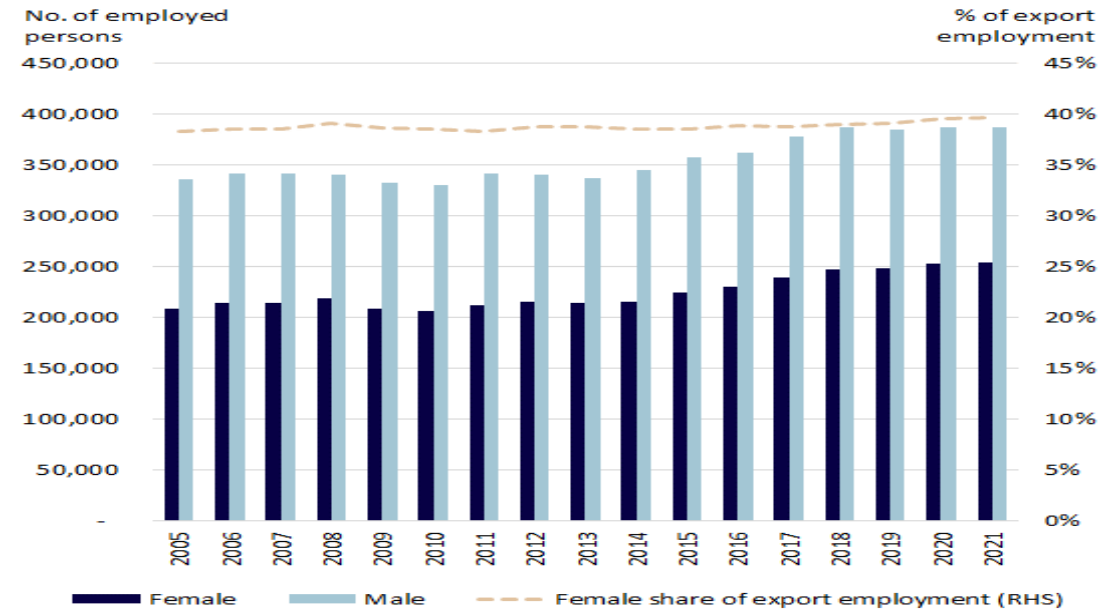
2. Smaller employment share in traditional exports (agriculture, mining, manufacturing).

3. Enterprises with strong domestic focus – healthcare, education – employ up to 70% of women

4. Higher employment of women in large enterprises (44% compared to 33% in SMEs)

4. Lower wages, smaller “export premium” for women compared to men

5. Only 15% of women-led firms, relatively higher share in SMFs



Finland: microanalysis and microlinking using high-quality registers

- Use of enterprise-level data from different registers, such as statistical business register, employee register, etc.
- Companies broken down by
 - trading status (two-way traders/exporting firms/importing firms/non-traders)
 - firm size
 - group relation (combinations of employees, industry groups)
- 4-step process similar to the New Zealand approach

Finland: bigger gender disparities for women employed in external trade

- Labour productivity and salaries much higher in the exporting sector
- Share of employed women: 36% in the non-trading companies and 27% in trading companies. Since 2012 the share of employed women in the trading companies kept falling
- Gender pay gap: 2 percentage points higher in exporter companies compared to domestic businesses
- Among non-traders and importers the shares of women and men among highly educated personnel was equal. In contrast, among exporters men account 60% of highly educated workforce
- One-third of women entrepreneurs in the economy, one-fifth – in the export sector

Georgia pilot: gender-in-trade
indicators (2021-2022)

Methodology, data requirements (cont.)

- In a small open economy like Georgia, the trade-to-GDP ratio averaged over 100% in 2015-2021.
- The key focus of the study: *merging trade data with enterprise-level data mostly from business statistics surveys.*

Benefits: Individual enterprise-level data on trading companies provide flexibility of deriving gender-in-trade statistical indicators at different disaggregations.

General characteristics of the study (2021)

What was done:

1) Sectoral analysis of a number of exporting industries: gender-in-trade indicators were analyzed for 5 export products at the sectoral level

2) Microlinking of available sources to trade data

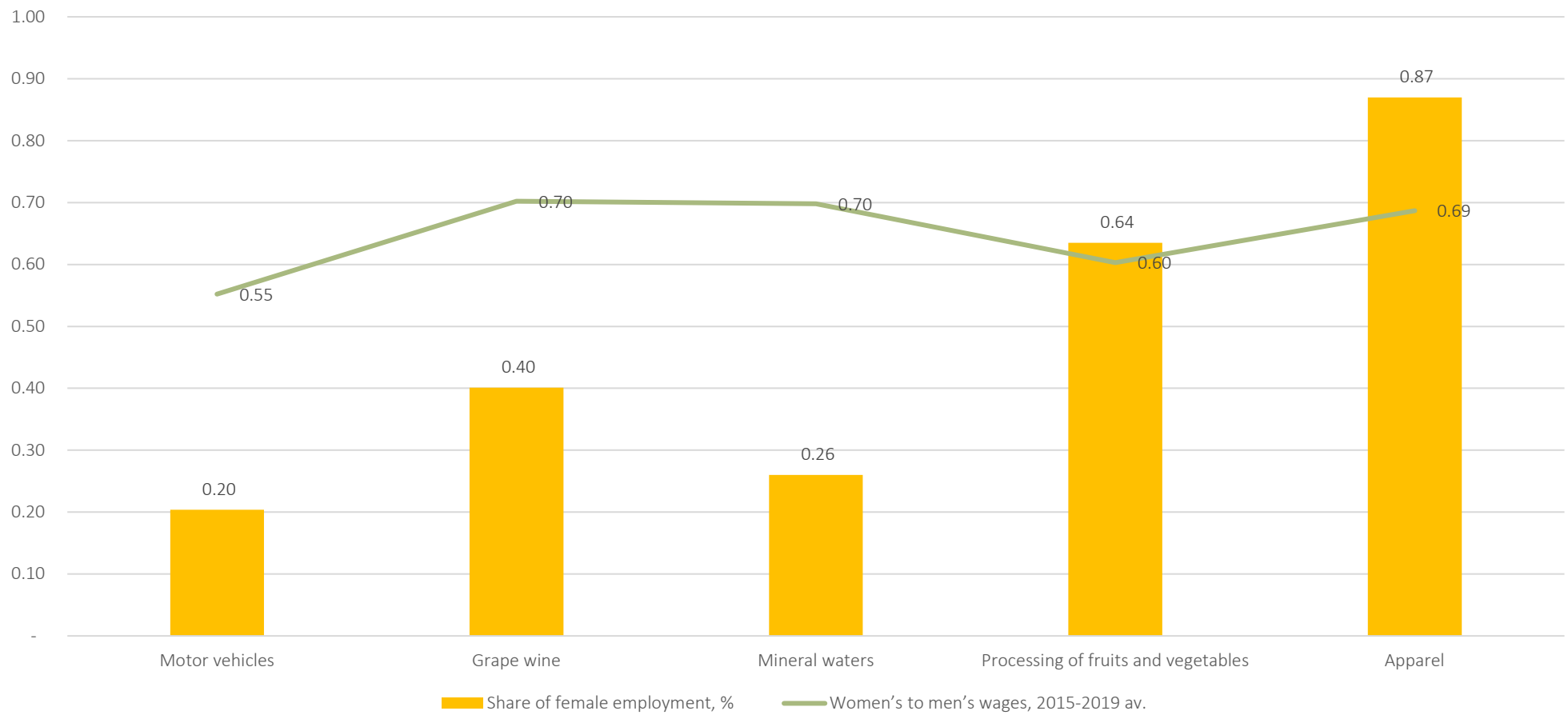
■ Data used:

trade data (annual, 2016-2020);
structural business statistics (annual, 2016-2020);
statistical business register;
structure of earnings survey (2017).

■ *Critical factors:*

trade microdata is received by Geostat (monthly) from the customs agency.
Single enterprise ID used by all government agencies

Sectoral Approach: gender disparities in sector-specific employment and earnings



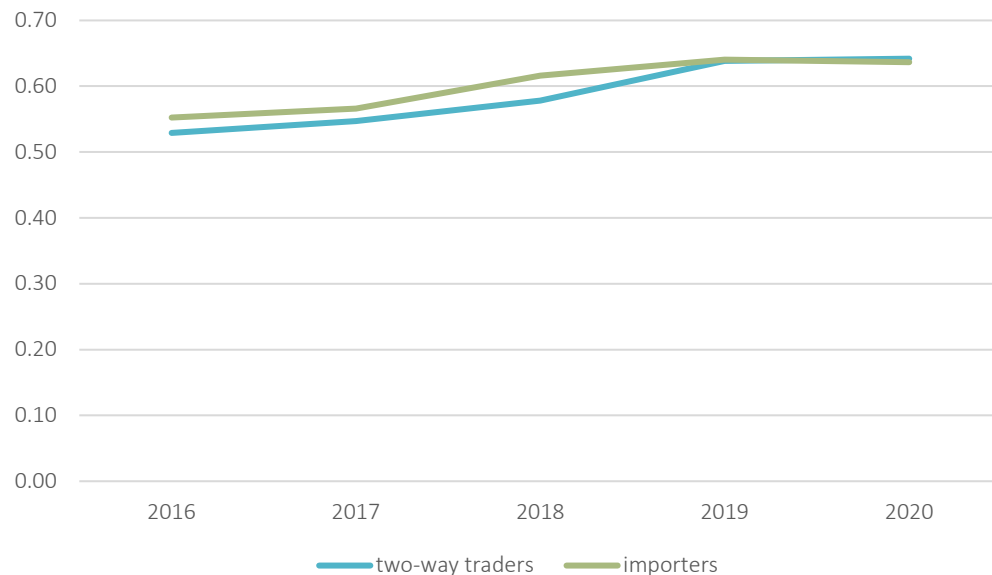
Sectoral Approach: no universal patterns in explaining gender pay gap in terms of occupations

	Sale of motor vehicles		Manufacture of wine from grape		Production of mineral waters and other bottled waters		Processing and preserving of fruit and vegetables		Manufacture of wearing apparel	
	Gender pay gap	Weighted Impact*, %	Gender pay gap	Weighted Impact*, %	Gender pay gap	Weighted Impact*, %	Gender pay gap	Weighted Impact*, %	Gender pay gap	Weighted Impact*, %
Managers	49.70%	35.00%	25.80%	14.60%	82.80%	11.80%	5.40%	1.70%	49.20%	6.90%
Professionals	26.20%	28.00%	41.20%	23.10%	36.20%	15.10%	-21.70%	-3.50%	30.20%	2.50%
Technicians and associate professionals	20.30%	13.90%	1.10%	0.30%	-3.50%	-0.10%	54.60%	23.40%	35.80%	7.00%
Clerks	33.10%	5.10%	15.60%	6.10%	65.60%	43.50%	28.20%	15.20%	-4.30%	-0.30%
Service and sales workers	23.30%	14.00%	-11.00%	-5.00%	n/a	n/a	-20.00%	-1.30%	-78.60%	-5.30%
Skilled agricultural, fishery, and forestry workers	n/a	n/a	30.60%	11.60%	n/a	n/a	28.90%	0.50%	n/a	n/a
Craft and related trades workers	44.50%	8.00%	-11.50%	-14.80%	n/a	n/a	-2.30%	-2.70%	34.40%	77.10%
Plant and machine operators and assemblers	-16.30%	-4.00%	6.00%	3.30%	n/a	n/a	-14.00%	-2.40%	69.30%	31.90%
Elementary occupations	n/a	n/a	17.80%	60.80%	52.50%	29.70%	24.70%	69.20%	-13.10%	-19.70%
Total, sector	44.80%	100%	23.10%	100%	22.60%	100%	36.40%	100%	44.60%	100%

Microlinking results: basic indicators

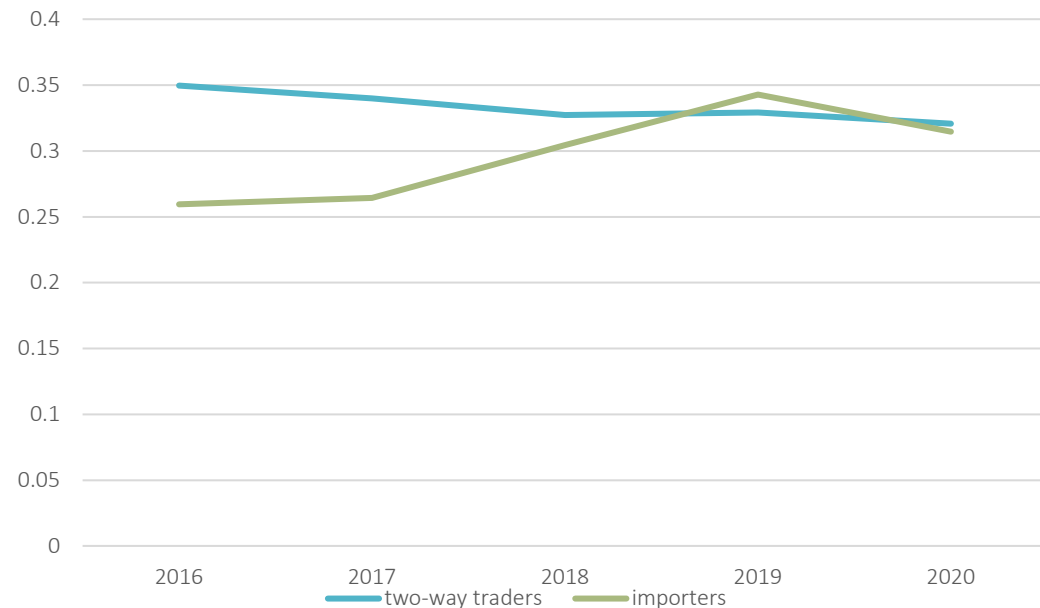
Women's employment remained inferior to men's, although it kept increasing

Employment ratio (women/men), 2016-2020 (%)



Gender pay gap was higher for two-way traders

Gender pay gap, 2016-2020 (%)

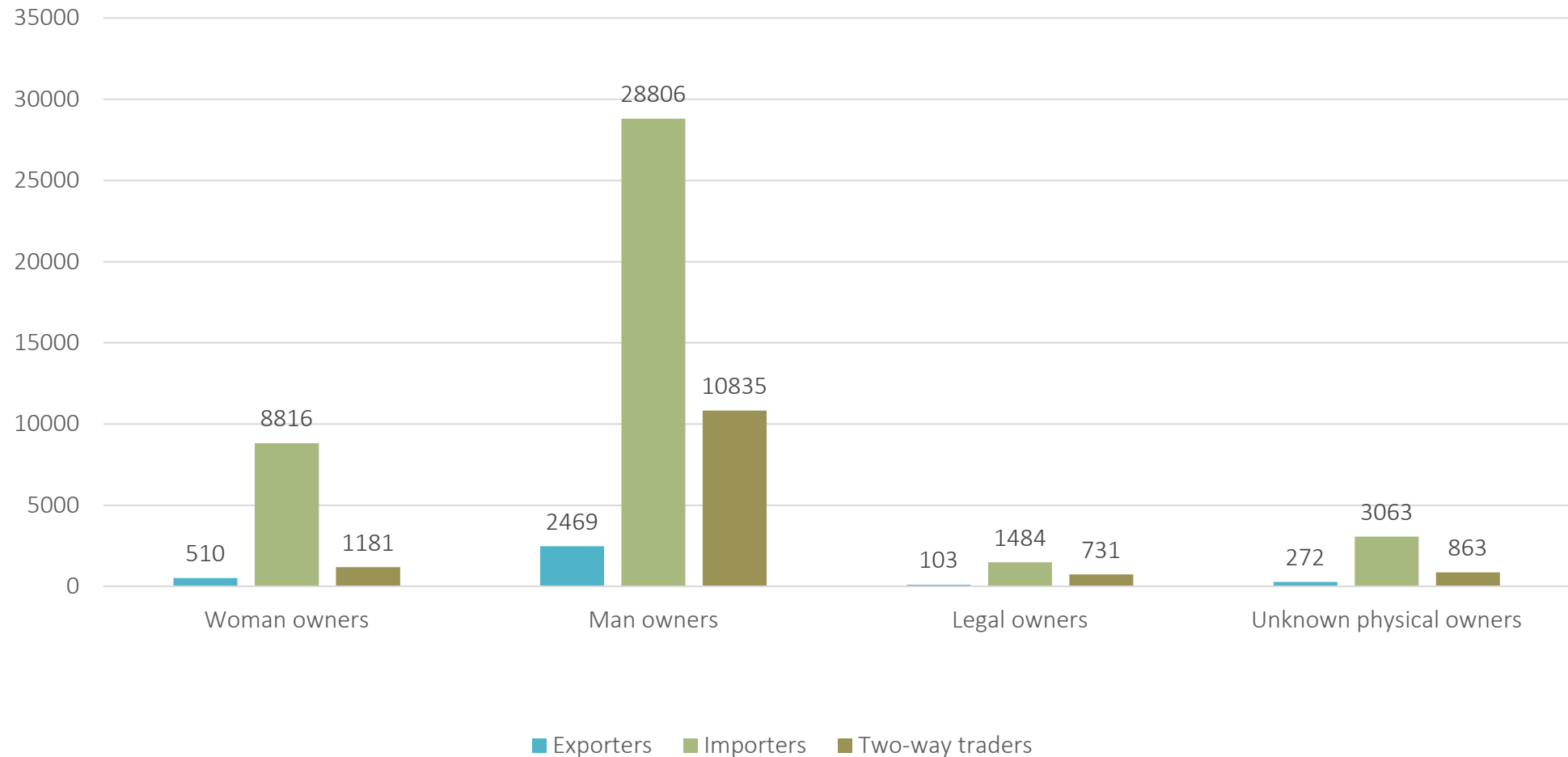


Differentiation by occupations shows high-skill workers most resilient to gender inequality

2017 structure of earnings survey		employment ratio	gender pay gap
two-way traders	managers	0.4	0.41
	high-skill workers	0.83	0.3
	medium-skill workers	0.36	0.34
	low-skill workers	0.62	0.45
importers	managers	0.45	0.38
	high-skill workers	0.91	0.15
	medium-skill workers	0.33	0.39
	low-skill workers	0.55	0.43

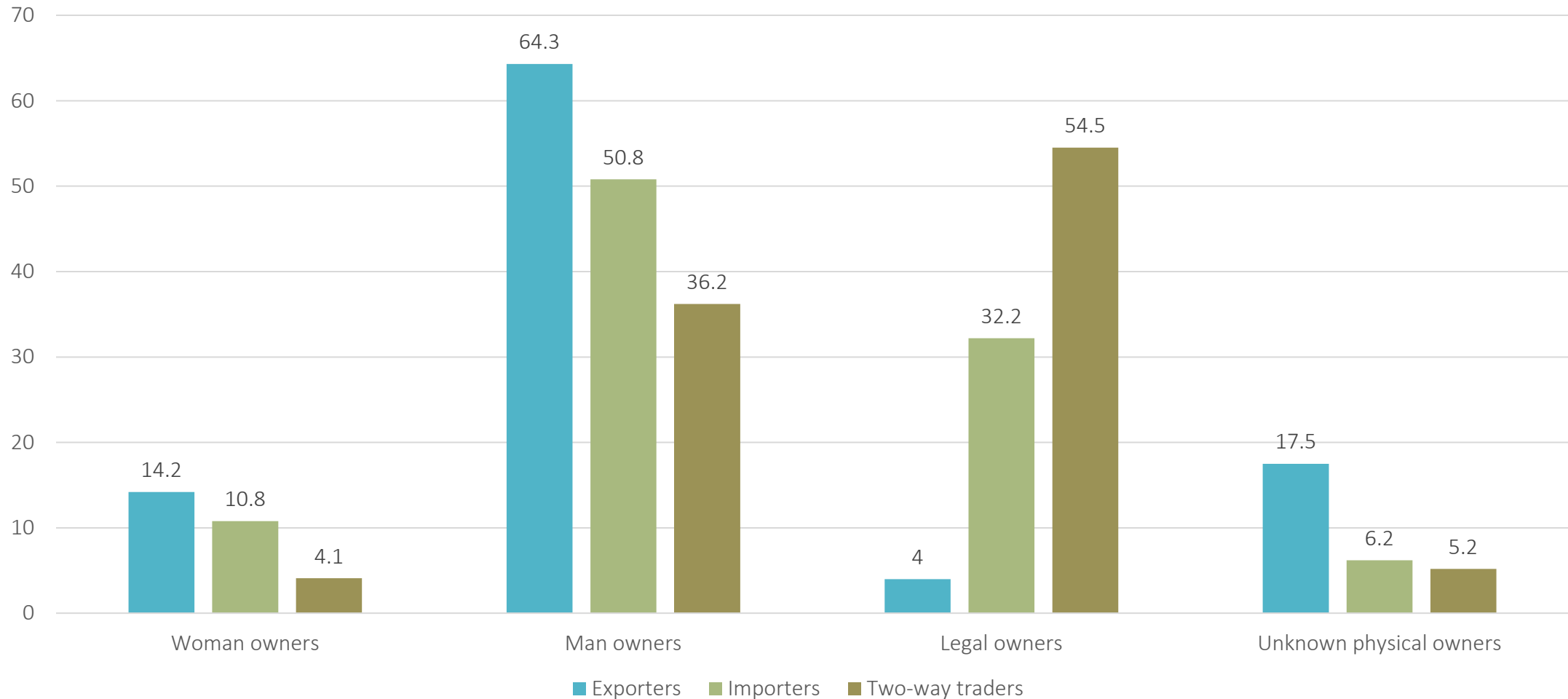
Microlinking: ownership of trade companies

Number of male owners was significantly higher than that of female owners for all types of trading companies



Microlinking: ownership of trade companies, trade-weighted

The trade-weighted ownership share of men (*data shown in percentages*) exceeded that of women approx. 9 times in two-way traders, 5 times in importers.



Impact analysis: COVID

Use of 2021 trade and business statistics data to analyse the impact of COVID on gender aspects in trade.

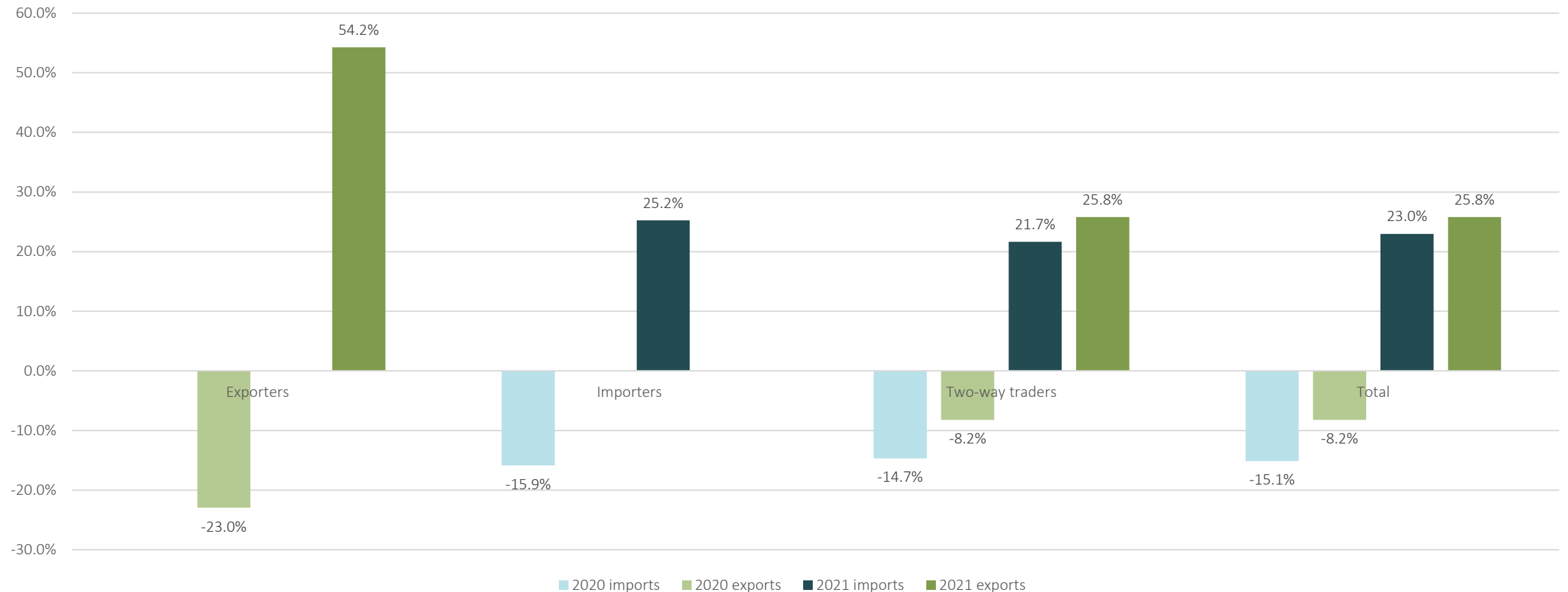
Year 2019 – benchmark (no COVID)

Year 2020 – COVID crisis

Year 2021 – recovery from COVID

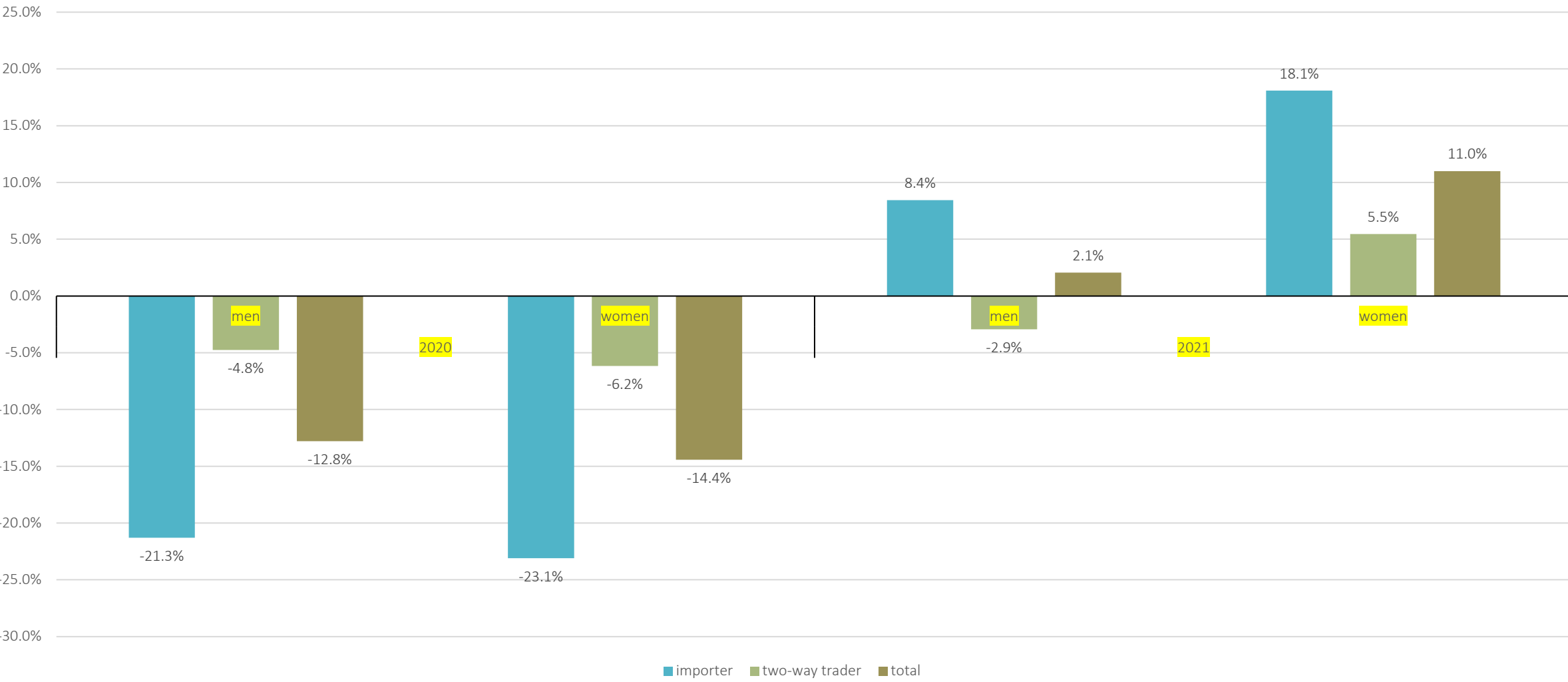
Key results of COVID impact analysis: 1. recovery in 2021

Value of exports and imports fell in 2020 but strongly rebounded in 2021, exceeding pre-pandemic levels



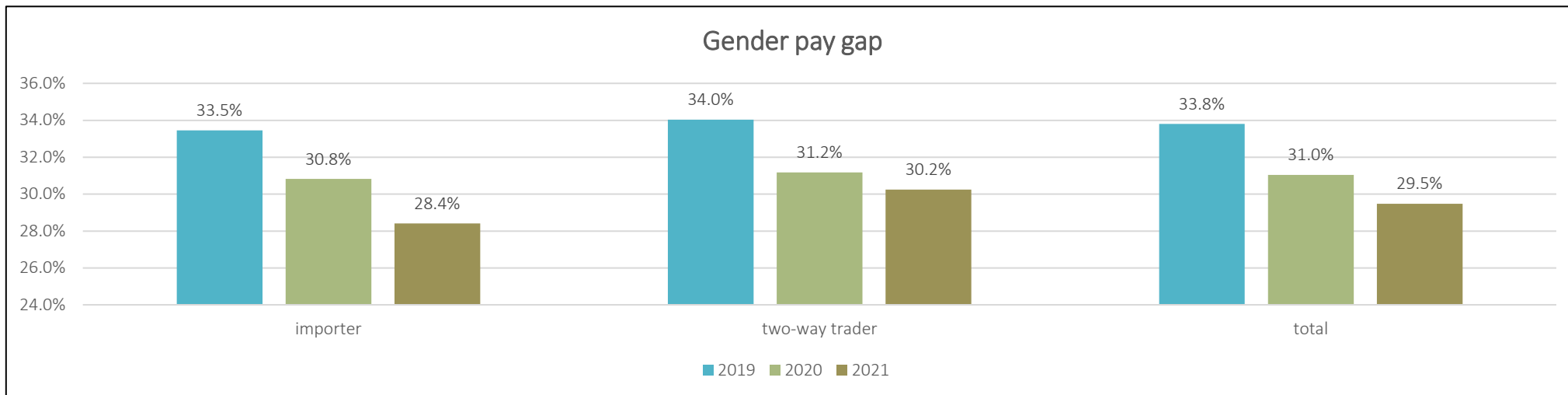
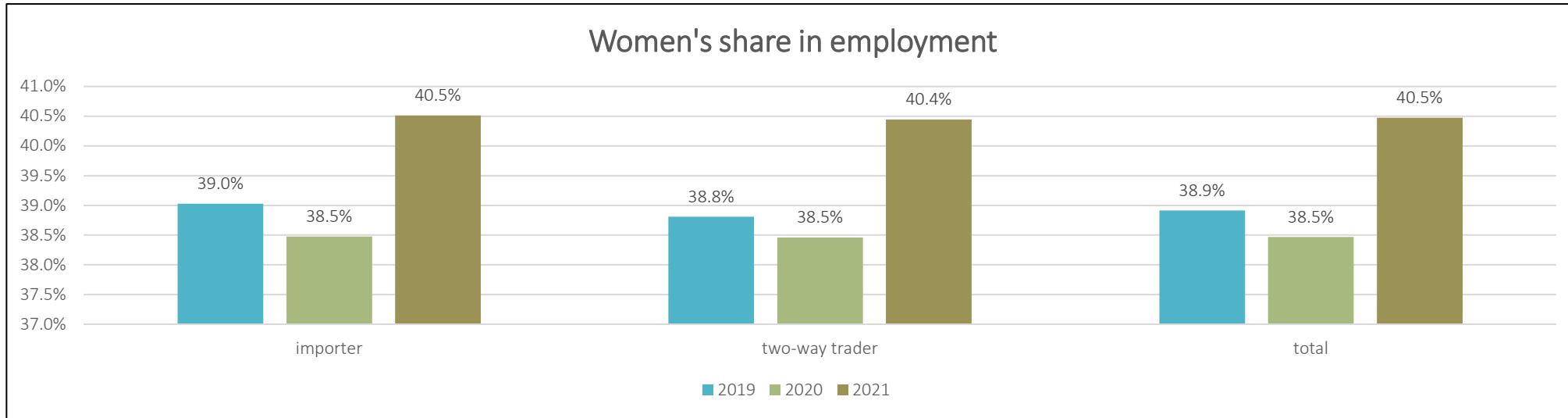
Further analysis: COVID and gender-in-trade (cont.)

Despite the economic recovery, the employment did not catch up with economic performance



COVID and key gender-in-trade indicators

- ▶ Women's share in employment slightly worsened in 2020 but improved in 2021, gender pay gap improved in both 2020 and 2021



Conclusions

- Significant potential for studying and promoting gender equality.
- Microlinking - a preferred method of analysis.
- Impact analysis of significant macroeconomic policies/shocks can be performed.
- The gender-in-trade statistics will continue to expand.
- Linkage of more data allows for additional insights of factors affecting gender disparities