



WORKING PAPER IN BRIEF



# INCLUSIVE AND SUSTAINABLE INDUSTRIAL DEVELOPMENT: THE GENDER DIMENSION

## SUMMARY

Industrialization can significantly contribute to poverty reduction and shared prosperity. However, women are often precluded access to secure and well-paid jobs in manufacturing industries and related service sectors, and their participation in the development of new technologies remains limited. Recognizing this, UNIDO is committed to a policy agenda that promotes gender equality for achieving inclusive and sustainable industrial development (ISID). Gender equality means equality in rights, responsibilities, and opportunities. In the context of ISID, it is about ensuring that the interests and needs of women and men are given equal weight in industrial policy design and implementation. This brief, based on a UNIDO working paper, outlines the advancement of the twin policy agenda of ISID and gender equality by providing a conceptual framework and empirical base from which to understand the inter-linkages between gender equality and industrial development.

For more information, the full paper and bibliography, please visit <https://bit.ly/2UnJ3QZ> or write to [gender-coordinator@unido.org](mailto:gender-coordinator@unido.org)

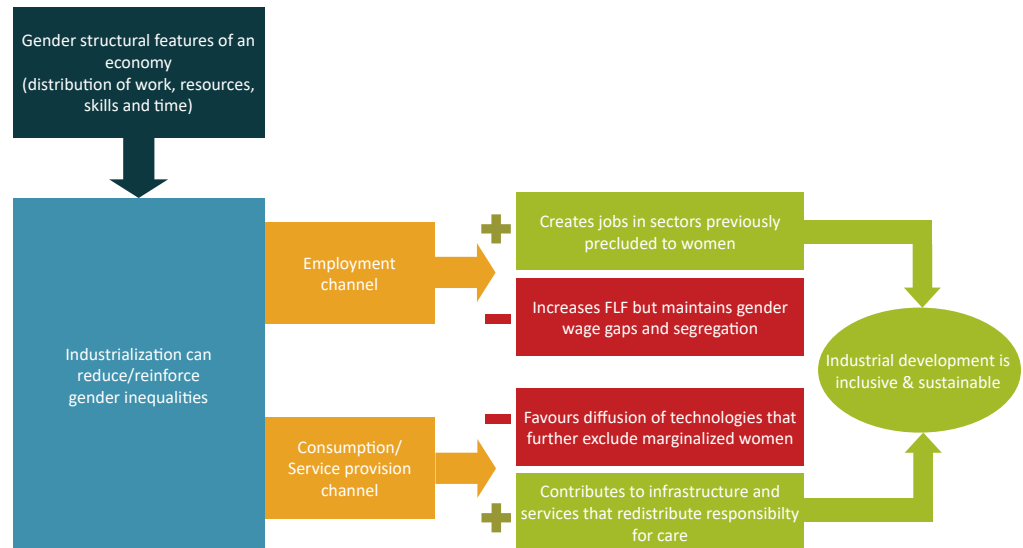
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## **Inclusive and sustainable industrial development (ISID) and why gender matters**

UNIDO's mandate of ISID means fostering industrial growth that is sustainable, promoting structural change while reducing inequality and generating jobs. This conceptualization recognizes that many industrialization trajectories are possible, and governments and businesses have the option of choosing between more or less inclusive and gender-equitable pathways. The two-way interaction between industrial development and gender equality/inequality must be acknowledged to achieve long-term, sustainable growth by implementing policies that address gender bias and promote broad social investment, as well as women's access to skills, entrepreneurial capacity, infrastructure and innovation.

## Mapping the gender effects of industrialization

Industrialization and industrial policies take place within economic structures characterized by gender bias in several dimensions. In turn, they further shape gendered economic structures by either reducing or reinforcing gender inequalities. Gender-differentiated distributional effects result not just from job creation/destruction across manufacturing sub-sectors, but also because of new products



and consumption opportunities made available by the development of the manufacturing sector. One approach (see Fontana, 2009) to analyse the distributional effects of industrial expansion identifies three channels that affect different groups of women and men.

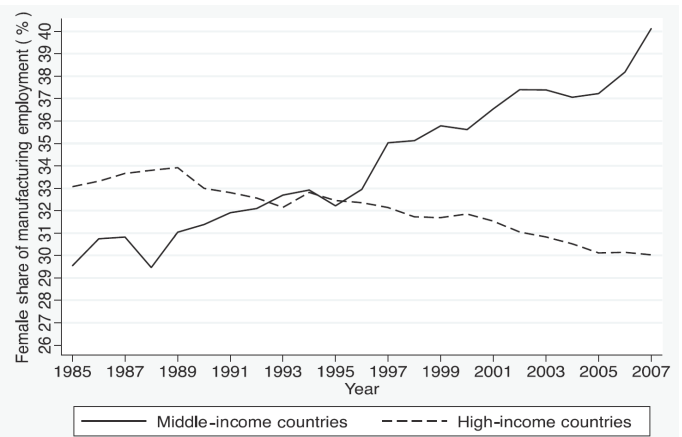
- the employment channel
- the consumption channel
- the public provision channel

Industrialization can reduce gender gaps in employment if it leads to the expansion of sectors that offer women more and better job opportunities than those previously available to them in other sectors. However, sectoral and occupational segregation by gender has only marginally declined over the last three decades in most developing countries, despite an increase in female labour force participation (ILO, 2017a). Gender-based hierarchical segregation also tends to persist in services enabled by manufacturing or facilitated by the development of new technologies such as jobs in the information and communication sector.

Technological diffusion and new consumption opportunities can reduce the time women must spend on household chores, thus reducing and redistributing the burden of unpaid domestic work and care. However, some researchers find no reduction in women's unpaid housework despite the greater availability of household appliances in some industrialized countries (Bittman, Rice and Wajcman, 2004; Offer, 2006) and others point out that such devices are of little relevance to women living in areas lacking basic water and energy infrastructure (Mitter, 2004). The potential of information and communication technologies (ICTs) for empowering women is not unequivocal either. Empirical research (Buskens and Webb, 2009; Elnaggar, 2008) illustrates challenges for women in using ICTs, primarily due to practical constraints such as literacy, education, financial resources and infrastructure.

## Gender patterns in manufacturing employment

A systematic aggregate picture of the main constraints and forces at play at the country level is necessary to inform relevant gender-equitable industrial policies. This analysis is informed by two studies (Tejani and Milberg, 2016; Tejani and Kucera, 2014) examining (i) broad trends in female shares of manufacturing employment and (ii) a detailed sectoral analysis of manufacturing to assess the importance of within-industry versus sectoral reallocation effects on female manufacturing employment. The two studies provide a comprehensive overview of manufacturing employment data from the 1970s through to the 2000s (graph is based on ILO data, Tejani and Milberg, 2016). The first identifiable pattern that emerges is



feminization in the early stages of industrialization and de-feminization in the more advanced stages. In the early stages, labour-intensive manufactured goods are produced by female labour that is comparatively cheap due to occupational segregation and large gender wage gaps, thus stimulating profits in the short run and generating higher levels of female labour force participation. More advanced stages of industrialization are marked by substantial technological upgrading of production towards capital intensity, which invariably results in a declining female share of employment.

These observations are examined in depth in the UNIDO working paper through case studies of three countries: Vietnam, Jordan and Ethiopia, which represent different geo-economic regions, production structures, and industrialization trajectories. Patterns identified suggest a story of female-led as well as export-led industrialization in Vietnam, and to a lesser extent in Jordan. These two cases also bring to light the particular vulnerabilities of female migrant workers, both internal and external. The trajectory of female employment as related to patterns in manufacturing seems to display no clear trend over time in Ethiopia as of yet. The availability of up-to-date employment data would enable observations of whether a pattern of feminization starts to emerge.

### Key conclusions

- Women's participation in manufacturing employment is closely associated with the expansion of a few specific, generally low-tech, sectors.
- In these female-intensive sectors, women seem to be preferred as semi-skilled assembly operators, but not in any other role.
- Changes in the technological conditions of production, as evidenced by growth of labour productivity in manufacturing, are shown to have the strongest impact. When production becomes more capital intensive, de-feminization sets in.
- Women's inclusion in the industrialization process in any country may therefore be a transient phenomenon. Policy responses require an understanding of both the macro gender structure of the economy concerned and the specific gender dynamics that relate to its manufacturing sector.



## Recommendations

The body of research supported by the findings of the three case studies lead to the following policy recommendations:

- **Sectoral gender value chain analysis to inform industrial policy and strategy:**
  - Conduct gender-focused sectoral value chain studies to generate sex-disaggregated statistics and examine with accuracy where women and men are located in the various segments of the chain, their paid and unpaid contributions, main bottlenecks and power imbalances faced, as well as compliance with labour standards.
  - Direct analysis and policy design towards strengthening the inclusiveness of potential new sectors and the competitiveness of economic sectors where women already work in significant numbers, to enable women to participate in new sectors and roles.
- **Physical and Social Infrastructure:**
  - Provide quality and widely accessible physical infrastructure such as roads, energy, transport and ICTs, ensuring that such projects are designed and implemented to address women's needs.
  - Provide accessible, affordable and quality child care for manufacturing workers and women owning SMEs.
- **Resourcing national and sectoral gender machineries:** Efforts of various government institutions need to be coordinated under a well-defined gender mainstreaming agenda that involves ministries and departments responsible for economic decisions. Relevant departments and institutions should be provided with the adequate resources and skills needed to carry out detailed gender-responsive design and monitoring of economic policies.
- **Skills development and participation in STEM:** Targeted interventions to increase women's access to skills development and participation in technical subjects, i.e. challenging gender-stereotypical attitudes in the wider public and building women and girls' confidence to participate in STEM fields; revising learning materials and practices in schools to break down persistent prejudices about boys' and girls' abilities; helping employers overcome their own gender prejudices and incentives to provide on-the-job training for their female workforce; childcare services for mothers who attend trainings; and addressing the specific training needs of self-employed women.
- **Supporting migrant women:** Migrant workers should be covered on an equal footing with local workers, in law and in practice, by labour legislation on minimum wages, collective bargaining, and social protection. This also calls for increased collection of data to identify and address their needs and abilities when developing policies.
- **Supporting women entrepreneurs:** Targeted interventions to address challenges women face in running their business, i.e. business development services, such as counselling, coaching, and mentoring; improved access to finance, including provision of grants, loans, microcredits, and loan guarantee schemes; strengthening the ability of organizations such as women's business associations to both provide financial services to women entrepreneurs and to help women entrepreneurs connect with one another.
- **Increased data collection and analysis:** Improve sex-disaggregated data collection and gender analysis in relation to industrialization, including for smaller firms and informal sector. In countries with high levels of informal and migrant workers, improved collection and analysis of statistics at highly disaggregated levels and at regular intervals is needed to ensure their particular vulnerabilities are taken into account when developing policies.