

Human capital formation in the Caribbean

Implications for labour productivity and
sustainable development

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UNITED NATIONS ECONOMIC COMMISSION FOR LATIN AMERICA AND THE CARIBBEAN, SUBREGIONAL HEADQUARTERS FOR THE CARIBBEAN

Presentation Outline

- 1. Study background**
- 2. Drivers of human capital in the Caribbean**
- 3. Labour productivity in the Caribbean**
- 4. Cross-cutting issues**
- 5. Conclusion**



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Study Background

Labour as a factor of production

- Through the ages, labour has played an important role in production
 - Agrarian revolution => Industrial revolution => Knowledge economy
- Over time, the nature of labour has changed, become increasingly skilled
- Skilled labour (or Human Capital) makes other factors of production more productive and drives economic growth
- The accumulation of skilled labour (Human Capital Formation) in a country relies on that country continuously improving the skillsets of its labour force, in quality and quantity.
 - Quality education
 - Rich experiential learning (in-training and on-the-job)
 - Quality health



Human capital formation in SIDS

- As small island developing States (SIDS), Caribbean countries are typically characterized as having limited capacity, despite:
 - High-income, upper-middle income statuses
 - High HDI
 - High primary and secondary school enrolment rates
- The Antigua and Barbuda Agenda for SIDS recognizes key challenges to human capital formation in SIDS
 - Capacity and resource limitations
 - Demographic shifts
 - Migration patterns
 - Health crises (NCDs and mental health conditions)



Situation of human capital in the Caribbean

- The Caribbean has made significant progress in education access, particularly for women, but faces challenges with low academic performance and lack of functional skills among graduates leading to mismatches between the skills possessed by job seekers and those in demand by employers.
- CARICOM's Human Resource Development 2030 Strategy and national initiatives, like Jamaica's education reform, aim to align education with market needs by emphasizing skills like problem-solving and creativity.
- Insufficient human capital formation hinders innovation, limits labour productivity, and results in low economic growth in the Caribbean



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The challenge of skills mismatch in the Caribbean

- Education is not sufficiently impacting skills in the future labour force, especially in:
 - Problem-solving
 - Critical thinking
 - Creativity
- Employers of labour also require employees/job seekers to have soft skills.
- The implications of skills mismatches are many and progressively detrimental
 - Growing youth unemployment while businesses struggle to satisfy their labour needs
 - Persistently high youth unemployment is a push factor for the emigration of young professionals
 - Skills mismatch in the labour market leads to outsourcing of employment internationally with implications for foreign exchange reserve



Why the current study?

- There is evidence of steady decline in labour productivity in the Caribbean
- Low and declining labour productivity pose formidable challenge to economic growth and the sustainable development of nations
- A diagnosis of the contributory factors to this trend is essential to fully understand appropriate responses by key stakeholders in the human capital formation of a country:
 - Individuals and their households
 - The education system
 - Employers of labour
 - The government
- This study is an attempt by ECLAC to proffer recommendations for addressing the human capital constraints confronting the Caribbean.



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Drivers of human capital in the Caribbean

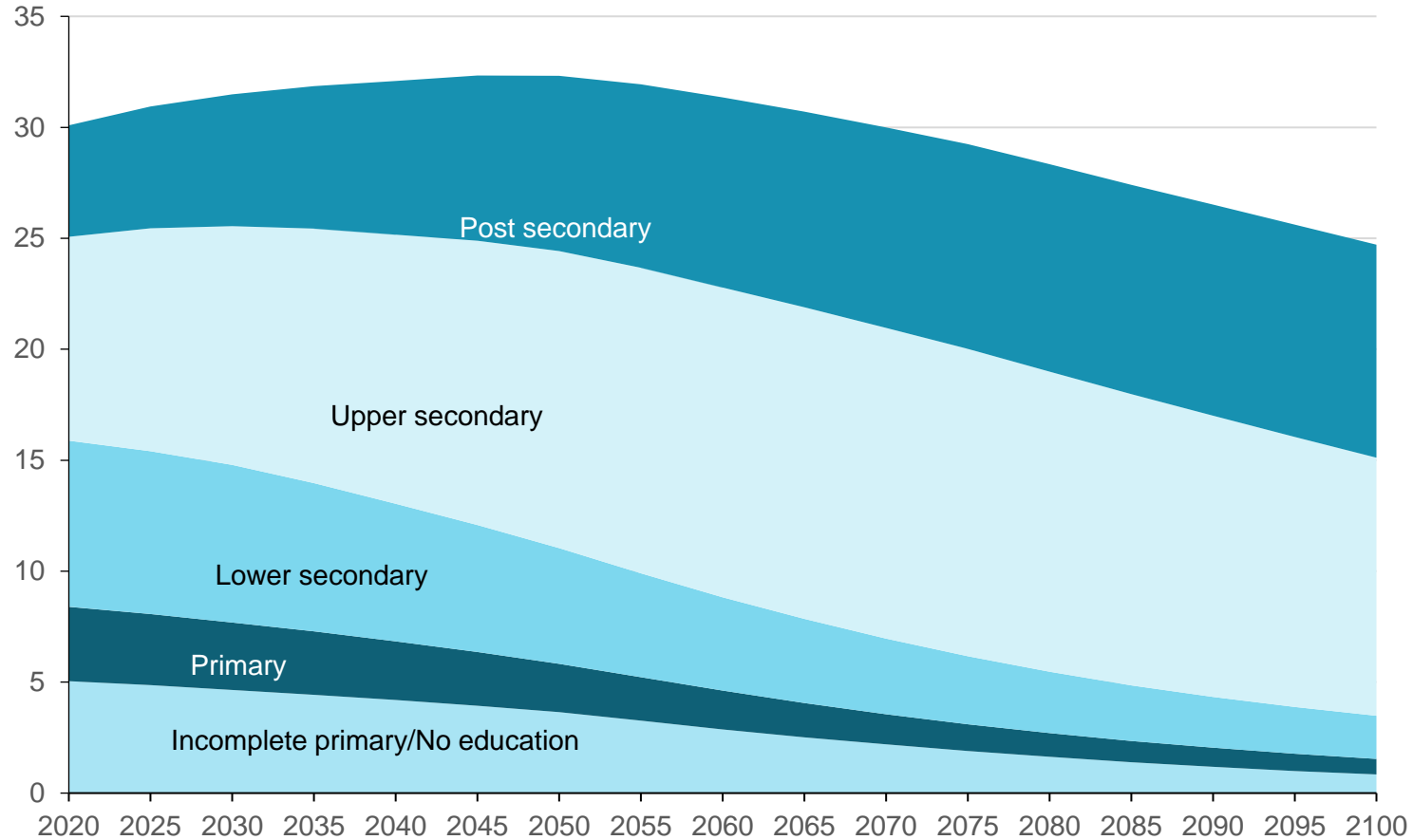
Population dynamics

- Working-age population projections show that the Caribbean population is:
 - Ageing
 - Becoming more educated
- The Caribbean is a net emigrant subregion, a population dynamic adding to loss of human capital through brain drain
 - Caribbean educational institutions are projected to produce more graduates than the number that will emigrate, but migration can (will) worsen labour mismatches if (because) those emigrating are those possessing high-skills



Population dynamics

Projected Caribbean population aged 15 to 64 by level of education, 2020 to 2100
(Millions)



Rates of emigration from the Caribbean to OECD countries among persons aged 15 and over with high education, 2000/01 to 2015/16 (*Percentages*)

	Persons with high education				All persons			
	2000/01	2005/06	2010/11	2015/16	2000/01	2005/06	2010/11	2015/16
Aruba	...	...	...	40.5	7.5	8.9	...	25.5
Antigua and Barbuda	...	...	...	...	33.2	28.1	...	...
Bahamas	19.5	23.4	...	14.8	12.4	12.3	12.3	11.5
Barbados	91.0	82.7	66.2	49.6	29.5	26.8	27.5	27.9
Belize	45.7	49.5	33.4	29.9	22.7	22.4	20.3	17.4
Bermuda	...	...	...	...	27.1	26.4	...	...
Cayman Islands	...	...	...	...	7.6	7.1	...	...
Cuba	27.8	26.1	20.0	30.4	9.6	10.6	11.4	13.1
Dominica	...	...	...	...	33.7	46.7	...	...
Dominican Republic	10.1	12.6	11.8	17	10.9	11.8	12.4	14.8
Grenada	...	...	..	58.6	41.5	40.6	...	42.0
Guyana	99.3	79.4	93.0	73.0	37.0	40.7	39.9	41.2
Haiti	70.7	75.4	75.1	73.0	8.9	9.3	10.7	10.7
Jamaica	47.1	50.6	48.1	50.8	31.3	32.8	32.7	32.1
Puerto Rico	...	...	...	29.9	30.8	30.2	...	35.2
Saint Lucia	...	...	...	44.5	18.8	17.8	...	33.2
Saint Vincent and Grenadines	...	...	...	55.8	30.9	27.1	...	33.1
Suriname	...	...	..	56.5	..	38.2	...	32.1
Trinidad and Tobago	72.4	74.0	68.2	35.5	22.2	23.3	23.2	23.8
Turks and Caicos Islands	8.8	7.6
United States Virgin Islands	66.4	37.1	38.3	...	43.9



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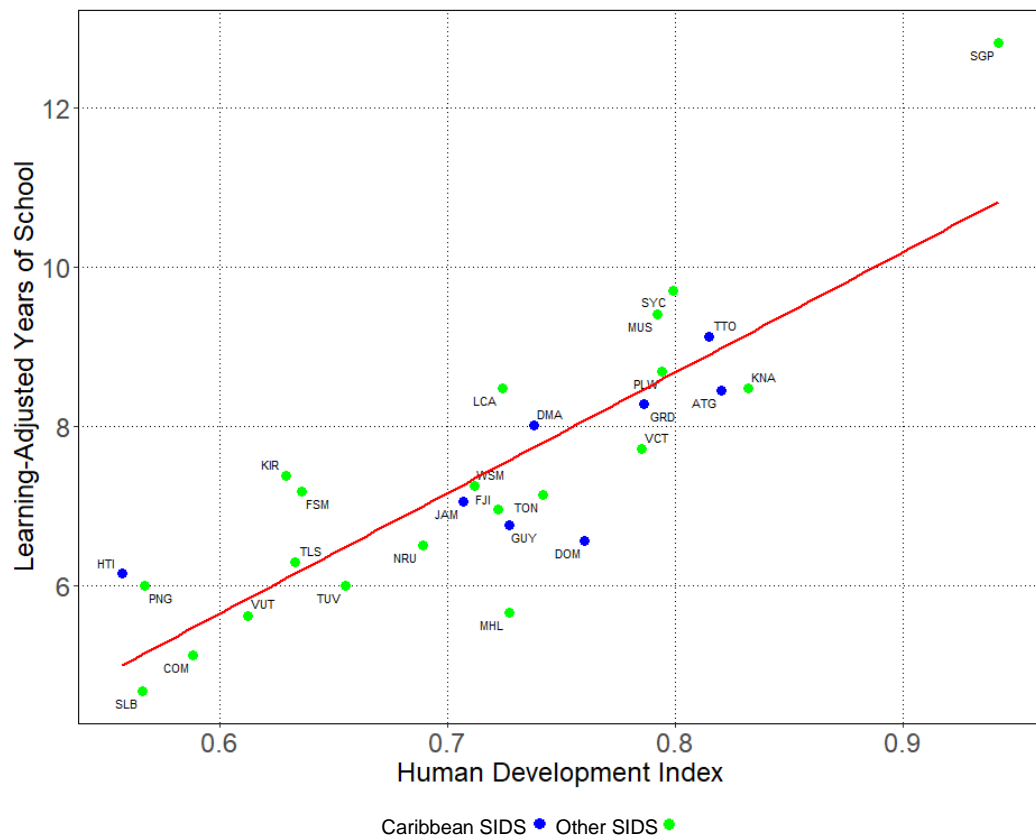
Education

- Education is a major contributor to human development.
- Due to the importance of education as a key driver of human capital, public investments in education are essential to equip the workforce with the necessary skills, allowing them to contribute to overall productivity through their labour.
- However, half of all Caribbean countries do not meet the UNESCO benchmark of public expenditure on education of 4% to 6% of GDP

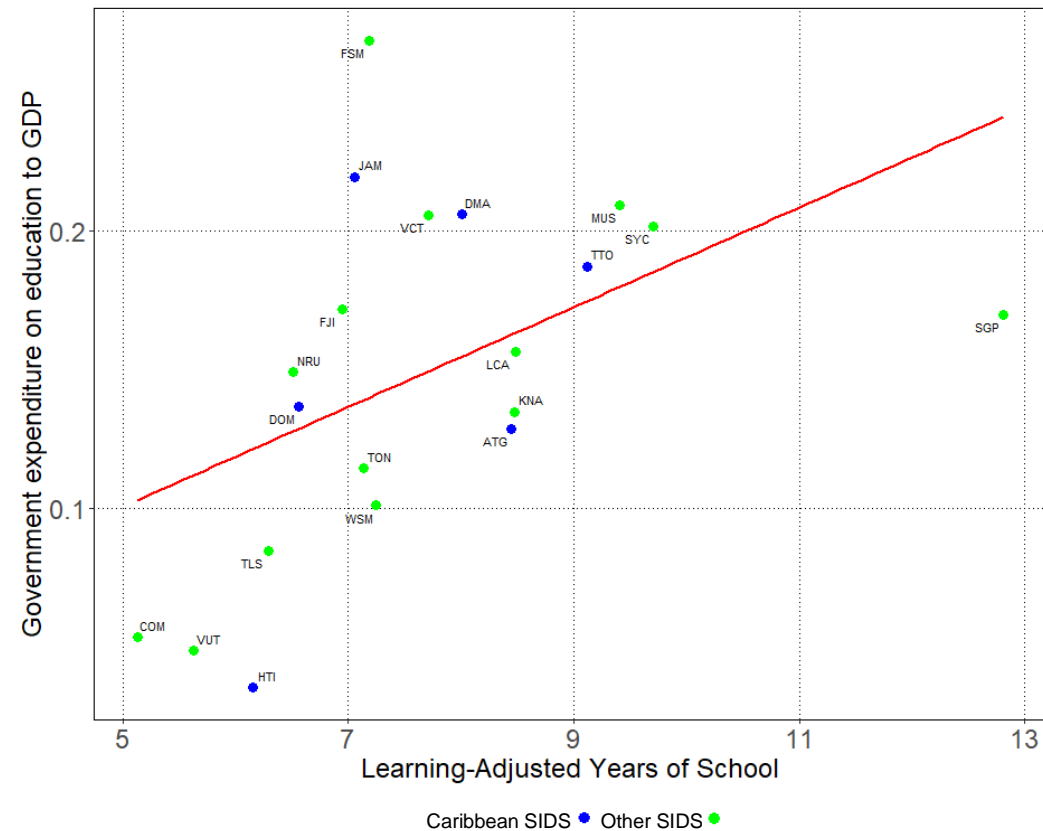


Education drives human capital

Correlation of the Human Development Index and learning-adjusted years of school in SIDS, 2020



Correlation of Learning-Adjusted Years of School and government expenditures on education to GDP (%), scaled for population under 18 years old in SIDS, 2020



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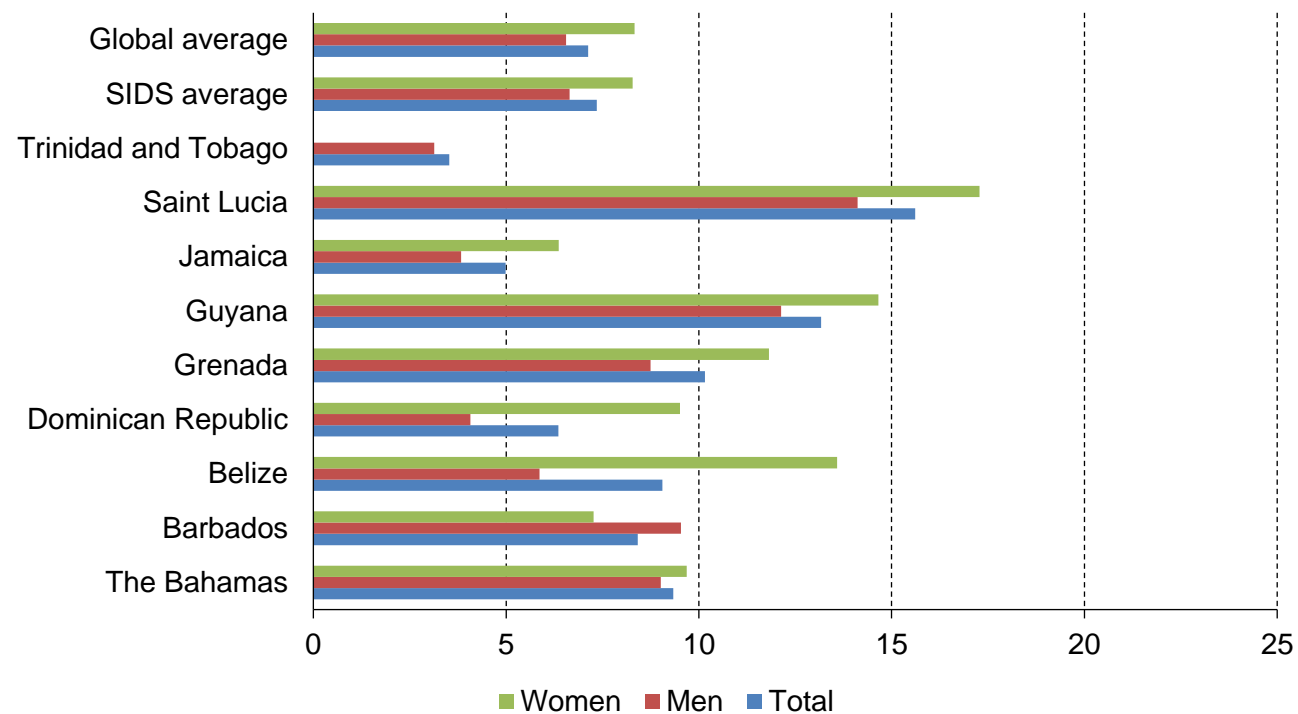
High unemployment and informality in the labour market impede human capital formation

- Unemployment rate in many Caribbean countries is persistently high and above global (7.1%) and SIDS (7.4%) averages (in 2019).
- There is a gender dimension with unemployment showing a clear gender gap. Women are underrepresented in high-paying sectors
 - Could lead to a persistent wage gap
 - Constitutes another push factor for the emigration of women
- Employment in high-paying sectors, such as STEM jobs, constitutes only about 2% to 4% of all employment in Caribbean countries. The low rate of STEM jobs dampens innovation and the ability to drive productivity through human capital.
- Informal employment rates are higher in many Caribbean countries compared to the global and SIDS averages. High prevalence of informal work excludes the working population from formal training and career development, curbing human capital formation.



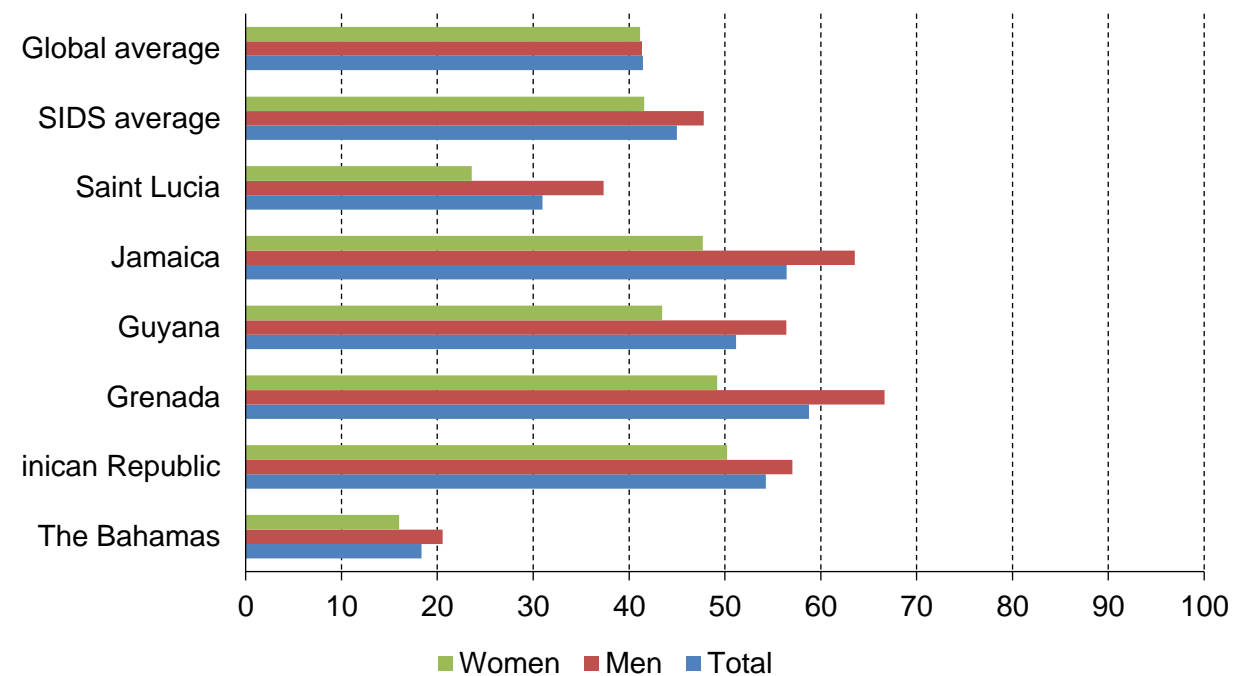
Proportion of total population unemployed by gender, 2019

(Percentages)



Proportion of informal employment by gender, 2019

(Percentages of total employment)



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**Proportion of employed persons in the Caribbean living below US\$2.15 per day,
Purchasing Power parity, by gender, 2015 to 2019
(Percentages)**

Country	Men					Women				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
The Bahamas	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Belize	15.0	15.3	15.5	15.4	15.0	12.2	12.3	12.6	12.8	12.7
Barbados	1.8	2.2	2.1	2.1	2.0	2.0	2.3	2.3	2.3	2.3
Dominican Republic	2.2	1.7	0.8	0.7	0.7	1.4	1.1	0.5	0.4	0.4
Guyana	4.1	3.6	3.5	3.4	3.0	4.0	3.6	3.5	3.5	3.4
Haiti	24.8	23.4	22.2	21.7	22.8	24.3	23.0	21.9	21.5	22.8
Jamaica	0.6	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.5
Puerto Rico ^a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Suriname	15.1	15.4	15.4	15.4	16.2	15.0	15.3	15.3	15.3	16.1
Trinidad and Tobago	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1



Labour productivity in the Caribbean

Human capital drives labour productivity by:

1. Producing more with the same amount of resources
2. Allocating resources (including education) more efficiently
3. Diffusing technological innovation, as skilled workers can make use these to increase productivity

Domestic market size and quality of institutions also drive labour productivity

However, insufficient human capital formation can perpetuate the middle-income trap.

This is especially the case for SIDS like Caribbean countries due to their small economies, tapping domestic market demand is not an option

Hence, human capital formation is key for labour productivity in Caribbean SIDS

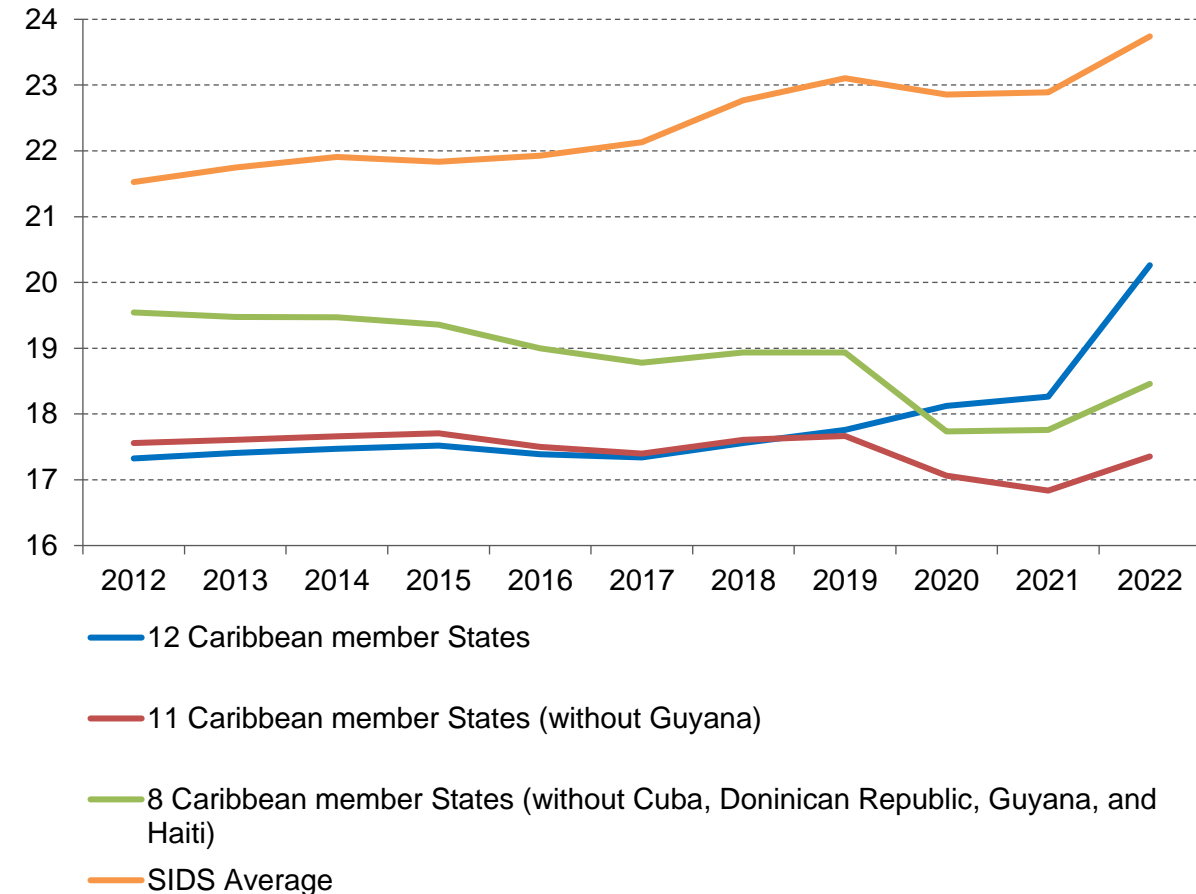


Labour productivity has stagnated

- Twelve Caribbean countries had data available for labour productivity: Bahamas Barbados, Belize, Cuba, Dominican Republic, Guyana, Haiti, Jamaica, Saint Lucia, Saint Vincent and the Grenadines, Suriname and Trinidad and Tobago (**blue trendline**). The trend appears to be positive.
- However, only the Dominican Republic, Guyana, and Saint Vincent and the Grenadines are the only countries with increasing labour productivity from 2012 to 2022
- Removing Guyana (**red trendline**) reveals a stagnating trend in labour productivity. A similar trend appears without Guyana and the three large-population Caribbean countries (**green trendline**).
- Labour productivity in the Caribbean is \$3-4 dollars lower than the SIDS average (**orange trendline**).

Labour productivity: output per hour worked, 2012 to 2022

(GDP constant 2017 international US\$ at PPP)



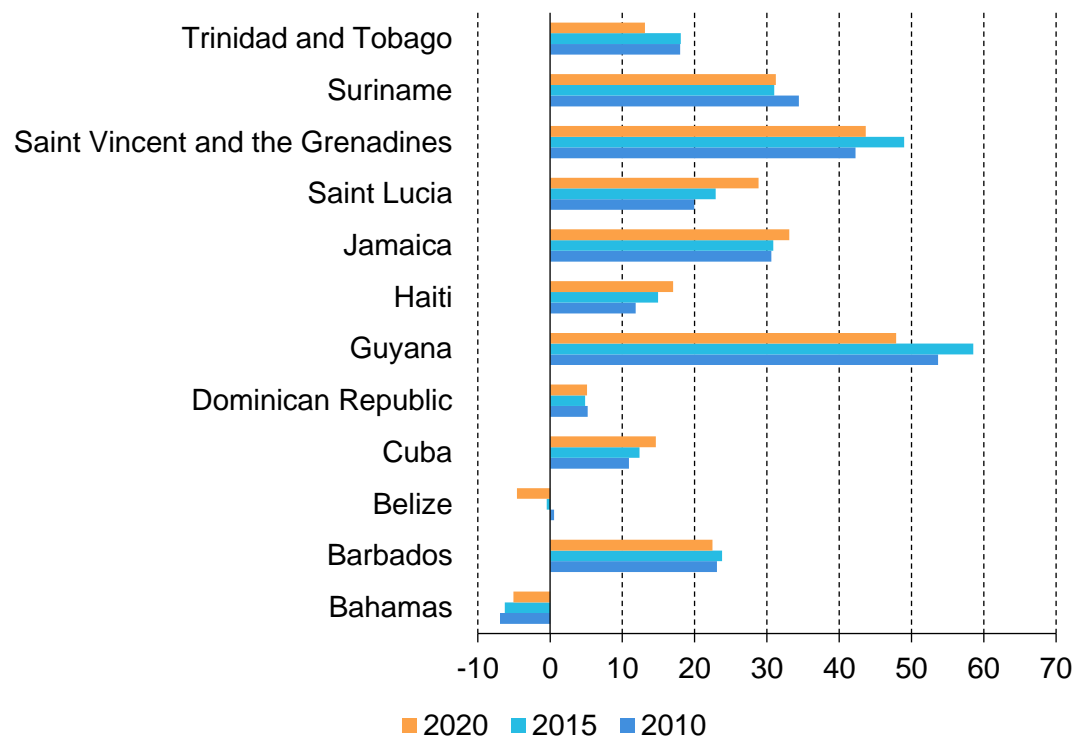
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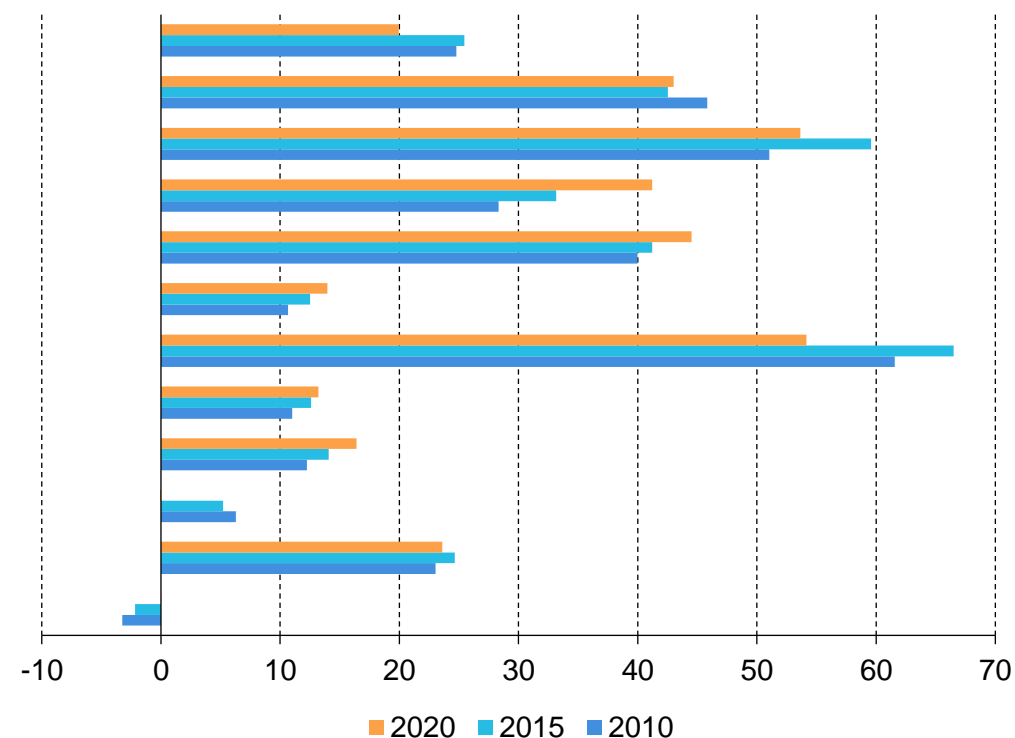
Emigration: a double-edged saw?

Net emigrant stocks by gender, 2010 to 2020
(Percentages)

A. Men

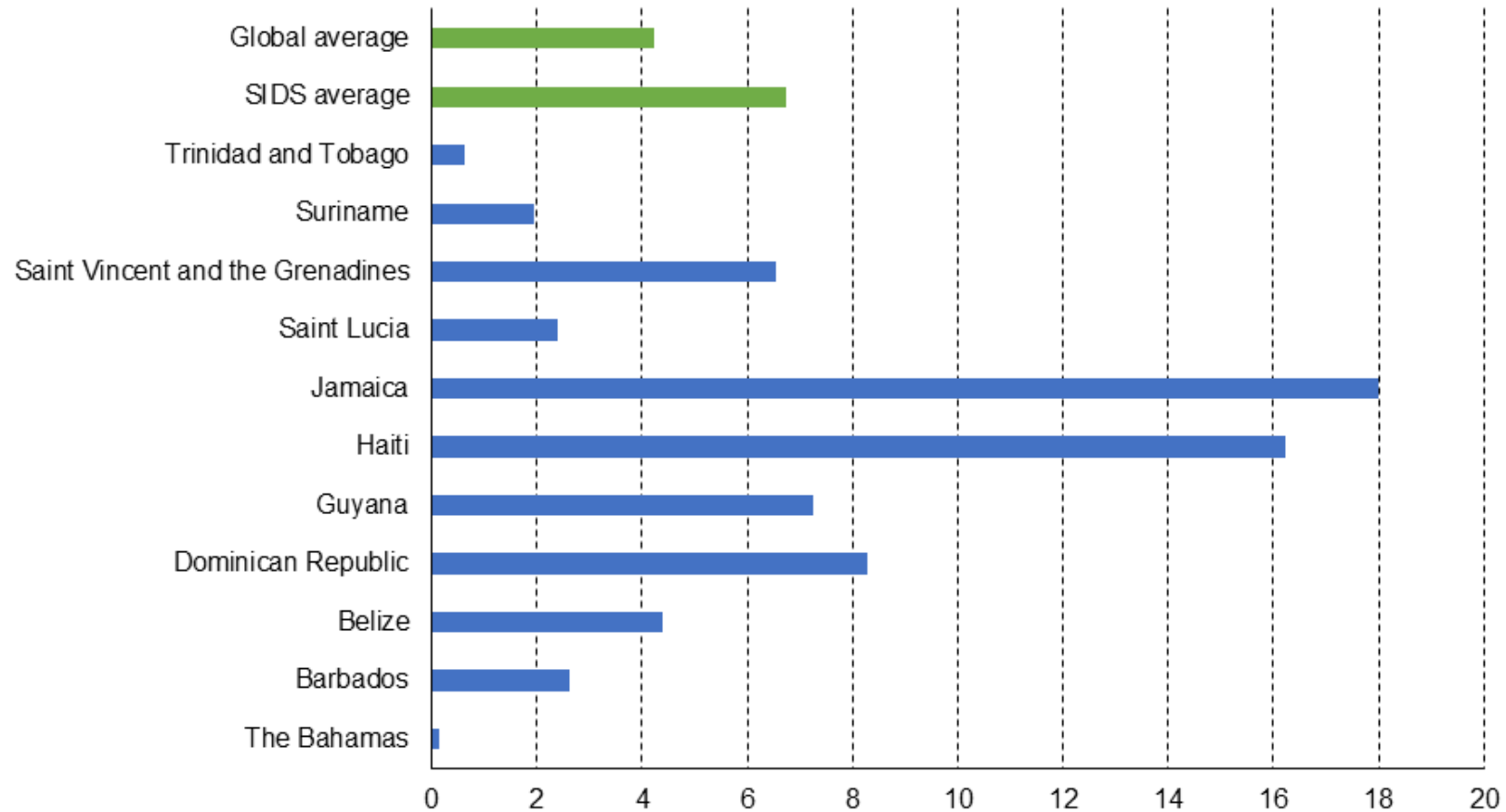


B. Women



Emigration: a double-edged saw?

Remittances received to GDP (current US\$), averages over 2012 to 2022
(Percentages)



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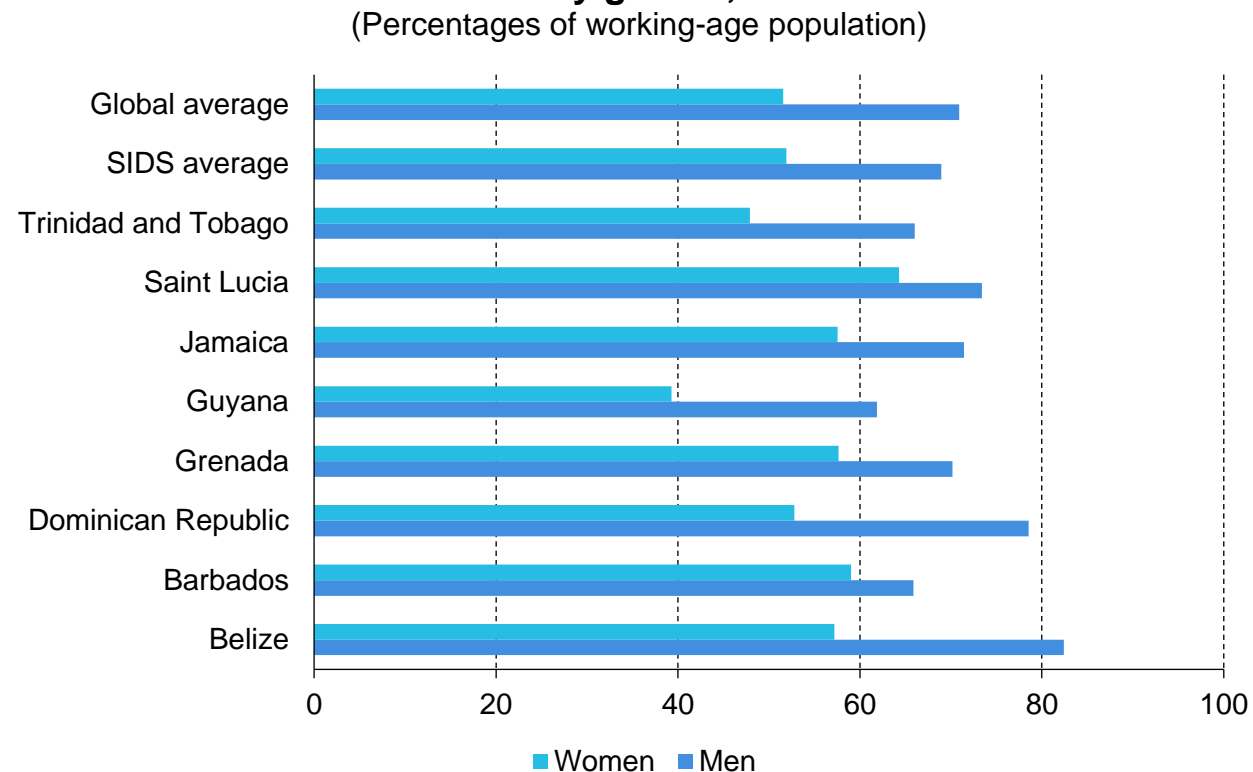
Cross-cutting issues

Labour mismatches have a gendered dimension

Correlation of the Human Development Index and learning-adjusted years of school in SIDS, 2020

Country	Learning-Adjusted Years of School		Human Capital Index	
	Boys	Girls	Boys	Girls
Antigua and Barbuda	8.0	8.9	0.6	0.6
Dominica	7.7	8.4	0.5	0.6
Dominican Republic	6.3	6.8	0.5	0.5
Grenada	7.9	8.7	0.5	0.6
Guyana	6.5	7.0	0.5	0.5
Haiti	6.0	6.3	0.4	0.5
Jamaica	6.7	7.5	0.5	0.6
Saint Kitts and Nevis	8.6	8.4	0.6	0.6
Saint Lucia	8.2	8.8	0.6	0.6
Saint Vincent and the Grenadines	7.3	8.2	0.5	0.6
SIDS average	6.9	7.5	0.5	0.5
Global average	7.8	8.1	0.6	0.6

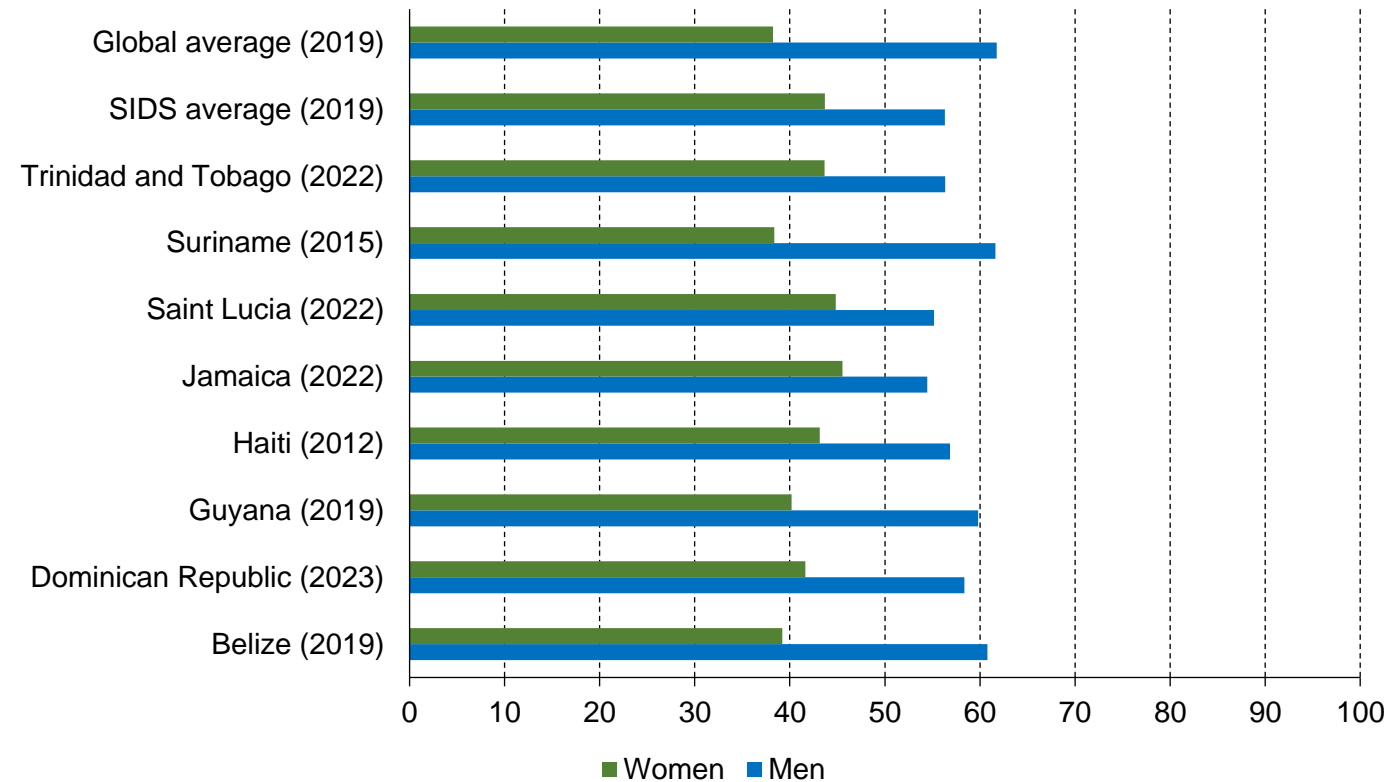
Proportion of population participating in the labour force by gender, 2019



Gender disparity in labour force participation

- Women contribute about 40% of weekly hours worked in the Caribbean
- Tourism dependent countries (e.g., Jamaica, Saint Lucia) show narrower gender gaps in weekly hours worked, as tourism employs higher proportions of women
 - However, women are often employed in low-productivity roles, contributing to stagnant labour productivity

Proportion of weekly hours worked annually by gender
(Percentages)



NCDs threaten human capital formation

- Non-communicable diseases (NCDs) in the Caribbean, like hypertension and diabetes, threaten public health, reduce labour productivity, and limit economic growth and human capital.
- An ageing population and high NCD prevalence, including childhood obesity, compound pressures on the Caribbean workforce, with potential long-term declines in productivity if preventive actions are not taken.
- Life expectancy in the Caribbean, while improved, lags behind Latin America, with NCDs accounting for 83.5% of deaths and 75% of disability-adjusted life years (DALYs) in 2019.
- Higher NCD death rates in Caribbean men than women lead to workforce impacts, including gender imbalances and reduced human capital due to disabilities and deaths during prime working years.



NCDs like diabetes, hypertension, and obesity are a labour productivity concern in the Caribbean

Population ageing and high NCD prevalence increase the burden of disability, absenteeism and presenteeism



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Social protection systems promote human capital formation

- These systems help children and adults participate in education and improve healthcare access
- Cash transfer programs have positively impacted school attendance and healthcare use, although effects on test scores or health metrics vary
 - Conditional Cash Transfer (CCT) programs in some countries link cash benefits to specific actions like school attendance or health visits, aiming to build human capital and eventually lift households out of poverty
- School feeding programs across the Caribbean enhance educational and health outcomes, improving productivity



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ICT infrastructure also impact human capital formation

- Digital inclusion is critical for human capital development, yet fixed broadband access remains limited, exacerbating educational inequalities and learning losses, particularly among lower-income students
- Closing digitization gaps could increase GDP by up to 10% if countries invest around 2% of their GDP in ICT
- Strengthening ICT infrastructure and skills offers the Caribbean new economic opportunities, including high-skill remote work and digital nomad programs, which can boost productivity and create global career pathways for local citizens



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Conclusion

The Caribbean faces skills mismatches threatening productivity

Gaps between job-market demands and workers' skills result in underemployment and low returns on education investments

- 1. Aligning education and workforce needs**
Collaboration between educational institutions and industries in emerging fields, like STEAM and green energy, is crucial, alongside improved labour market data systems for effective job matching.
- 2. Migration and workforce policy**
A comprehensive migration policy, encouraging diaspora engagement and attracting skilled workers, can counteract the region's brain drain and support labour market needs.
- 3. The importance of inclusion and health for human capital formation**
Expanding workforce participation of women and youth, addressing high rates of non-communicable diseases, and formalizing the informal economy are key to maximizing productivity and economic mobility.



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Thank you!



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