

Enhancing SME Support Systems in Yemen: Challenges, Opportunities, and Policy Recommendations

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Executive Summary

Yemen's entrepreneurs and Micro, Small, and Medium-sized Enterprises (MSMEs) are the backbone of its economy, yet they face complex challenges ranging from volatile currency and limited financial access to high trade costs and **significant digital infrastructure gaps**. These obstacles, backed by compelling data, severely limit business growth and economic stability.

In response to these challenges, this report proposes Digital Government as a transformative solution. Digital Government can streamline processes, enhance transparency, improve connectivity, and foster a secure online environment, directly addressing many of the identified barriers for MSMEs. Given the complex operational context in Yemen, external expertise and resources are vital for implementing such a comprehensive strategy. Therefore, ESCWA is strategically positioned as an essential partner. ESCWA's regional project (2024-2027) is explicitly focused on enhancing MSMEs' soft infrastructure and internationalization in the Arab Region, including Yemen. Their planned initiatives, such as developing e-registration platforms, facilitating policy dialogues, and establishing e-learning programmes, align perfectly with the needs for digital transformation and capacity building for Yemeni MSMEs. This report concludes by advocating for a proactive engagement with ESCWA to initiate and guide Yemen's digital government journey, paving the way for strengthened MSME growth and broader economic stability.

Introduction: Building Resilience for Yemen's Entrepreneurs

This report aims to evaluate the key challenges facing entrepreneurs and MSMEs in Yemen by systematically linking available empirical economic data with observed stakeholder feedback that was collected during ESCWA-led dialogues with Yemeni MSMEs. The objective is to provide data-supported policy recommendations for strengthening the MSME ecosystem

This analysis adopts an econometric perspective, using statistical methods and visualizations. It moves beyond merely presenting numbers, aiming to explain the 'so what' behind the data, transforming statistical insights into a compelling narrative. The report begins with an introductory macroeconomic overview before delving into specific thematic challenges.



Methodology and Data: An Evidence-Based Approach

This analysis provides an introductory economic overview of Yemen, focusing on the structure of the economy and labour market, particularly within the three major economic sectors as defined by the International Standard Industrial Classification (ISIC): Agriculture, Industry, and Services. These sectors were chosen as they represent primary economic divisions used globally for key economic indicators.

It is crucial to acknowledge that data availability for Yemen is often limited due to the ongoing conflict, especially for recent years. For instance, key business environment indicators like the B-READY series are currently unavailable for Yemen, which highlights existing development gaps. Despite these limitations, our approach provides empirical backing for the challenges discussed, ensuring our recommendations are grounded in observable economic realities.

Analytical Approach

The analysis will adopt an econometric perspective, employing statistical methods, visualizations, probability, and hypothesis testing in R Studio to investigate the relationships between various socio-economic and governance indicators and the identified challenges.

Statistical Software

R Studio will be used for data loading, cleaning, manipulation, visualization, and statistical analysis. Its extensive libraries provide the necessary tools for the planned econometric techniques.

Objectives

The report on Yemen's SME Support System has several key objectives:

1. Evaluate the key challenges faced by SMEs in Yemen.
2. Show the economic realities of Yemen SMEs.
3. Highlight challenges from a policy, institutional, and human lens.
4. Link stakeholder feedback with empirical economic data.
5. Blend macroeconomic logic with grassroots, community-level insight.
6. Drive toward evidence-based recommendations.



7. Provide data-supported policy recommendations for strengthening SME support systems.

This report aims to offer an evidence-based analysis of the Yemeni SME ecosystem, identify critical barriers, highlight opportunities, and provide actionable recommendations to foster inclusive SME growth.

ESCWA's Role and Support

The United Nations Economic and Social Commission for Western Asia (ESCWA) plays a pivotal role in supporting MSME development in the Arab Region.

This work is part of ESCWA's regional project (2024-2027) focused on enhancing MSMEs' soft infrastructure and internationalization in 10 target countries in the Arab Region, including Yemen. This project explicitly aims to support MSME formalization, internationalization, and e-commerce.

ESCWA's commitment to strengthening the MSME ecosystem in Yemen is demonstrated through potential initiatives such as:

- Assisting in the development of an e-registration platform.
- Creating a comprehensive ecosystem map for MSMEs.
- Supporting the organization of policy dialogues with entrepreneurs and partners.
- Helping design and implement online training programmes for MSMEs in areas like financial literacy or e-commerce; This directly addresses identified challenges such as low awareness of financing options and over-reliance on social media for e-commerce.
- Establishing an e-learning platform for MSMEs in Arabic and English.

The overall objective is to evaluate key challenges, link stakeholder feedback with economic data, and provide data-supported policy recommendations to create a stronger MSME ecosystem in Yemen.

ESCWA does not only offer technical solutions but also crucial support in policy formulation, capacity building, and stakeholder engagement.



Theme one: Introductory Economic Overview of Yemen

Understanding the broader economic structure and performance of Yemen is fundamental for developing effective strategies to support MSMEs.

This overview examines key aspects of the Yemeni economy that define the operational environment for businesses.

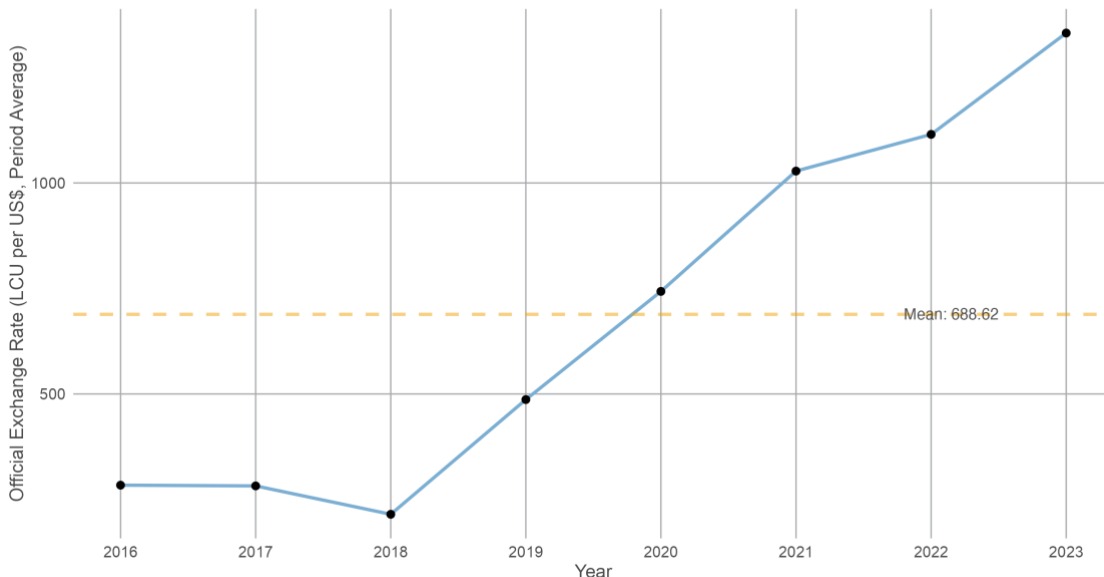
Exchange rates in Yemen

The plot shows the “Official exchange rate (LCU per US\$, period average)” over the years from 2016 to 2023.

- The Official Exchange Rate refers to the exchange rate determined by national authorities or the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages.
- The value on the y-axis represents how many local currency units (LCU) it takes to equal one U.S. dollar

Tracking the Official Exchange Rate Over Time

2016–2023



Source: World Bank.

Statistical Summary

Mean	Median	STD.DE V	Coeff. of Variation	Max	Min	Total Growth (%)	CAGR (2016– 2023) (%)
689	615	437	0.635	1355	215	377.328 7 %	25.0184 %

Key Insights

- The Official Exchange Rates are rapidly increasing over time with a ~ 400% increase over the average exchange rate during the period, meaning it now takes 6x more Yemeni Rial to buy 1 USD than it did in 2016. This indicates that the local currency is depreciating, indicating a loss in the value of the local currency relative to the USD.
- Higher exchange rate = weaker currency (more LCU needed per USD).
- The upward slope signifies depreciation in the local currency.

Currency depreciation directly raises the cost of imported goods and materials. It also creates uncertainty in pricing and financial planning, making it difficult for SMEs to invest and grow

The instability highlighted by the depreciation can also impact export competitiveness depending on how quickly exchange rates adjust and the nature of export markets.

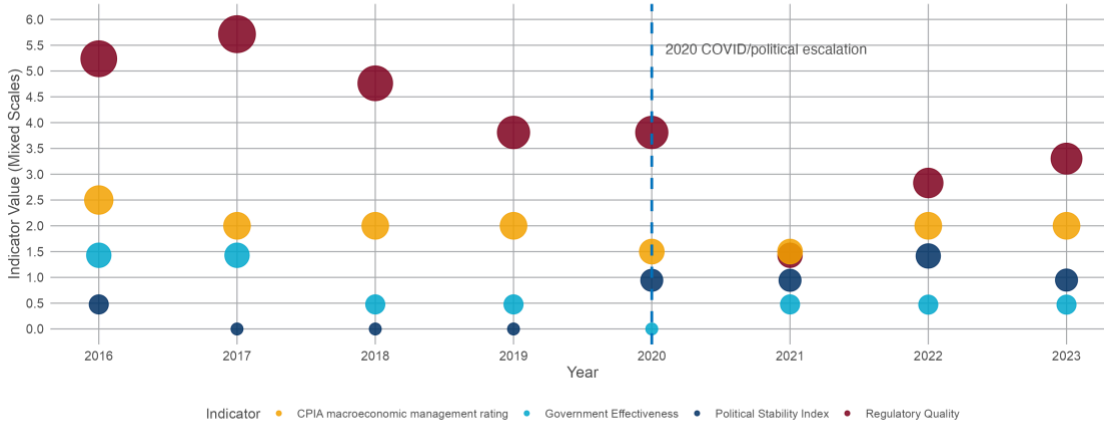
Impact of Macroeconomic Instability

The chart below focuses on presenting the available data points (the low CPIA macroeconomic management ratings, and the consistently low scores for Political Stability, Government Effectiveness, and Regulatory Quality), **these factors collectively demonstrate a high degree of macroeconomic instability and unpredictability.**

This instability creates a difficult operating environment that negatively affects business planning, investment, and expansion, resulting in MSMES to face the challenge “Currency fluctuations hinder expansion\ instability that businesses face”.

Yemen's Enduring Macroeconomic Instability and Weak Governance Environment (2016–2023)

Persistent low economic policy management (CPIA) ratings and low global governance ranks; reflect long-term institutional fragility and policy challenges for the business environment.



Source: World Bank (Worldwide Governance Indicators by Kaufmann & Kraay, and CPIA Ratings).
CPIA scores range from 1 (low) to 6 (high);
governance percentile ranks are on a 0–100 scale where 0 is the lowest rank and 100 is the highest.

Key Insights:

1. The macroeconomic environment in Yemen is marked by significant instability. The CPIA macroeconomic management rating (1=low to 6=high) has been consistently low over this period, never exceeding 2.5, directly signifying weak macroeconomic management.
2. This weak policy environment creates a fundamental driver of macroeconomic unpredictability for businesses.
3. Consistently low scores on the Political Stability Index highlight that ongoing political instability and violence are major sources of macroeconomic risk, severely limiting business operations and contributing to an unstable environment.

Merchandise Exports and Imports over time

This bar chart illustrates the trends in merchandise exports and imports for Yemen from 2016 to 2023, measured in current US\$ millions





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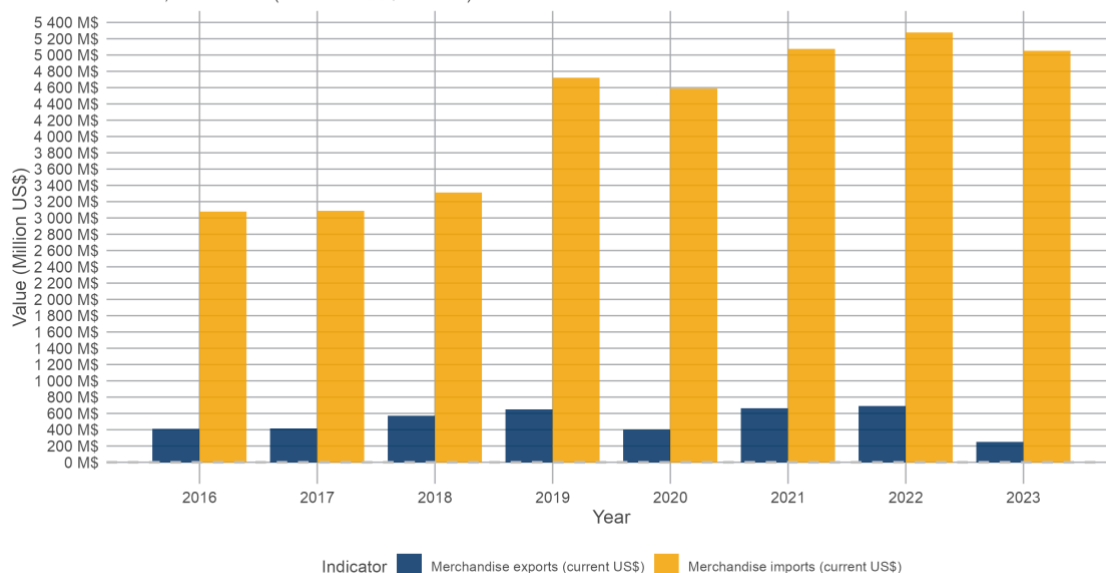
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Trends in Merchandise Exports and Imports Over Time

Yemen, 2016–2023 (in current US\$ millions)



Source: World Bank and World Trade Organization

Key Insights

1. Yemen exhibits a substantial trade deficit, with merchandise imports consistently and significantly higher than exports from 2016 to 2023. This indicates Yemen's heavy reliance on imports, including raw materials and goods essential for many businesses.
2. High customs and shipping costs have been identified as a main challenge for Yemeni entrepreneurs in ESCWA-led dialogues, and the high volume of imports suggests many MSMEs face these costs.
3. The low level of exports also points to challenges in internationalization for Yemeni MSMEs, likely linked to currency fluctuations, complex financing conditions, and logistics performance issues.

Digital Government: A Path to Economic Stability and Business Growth in Yemen

- Yemen's challenging macroeconomic environment, characterized by persistently low economic policy management ratings and weak governance indicators, severely hampers businesses.

Shared Prosperity Dignified Life



- Digital Government offers a crucial pathway to building more predictable and efficient public systems, directly supporting economic stability and fostering an environment where businesses can better operate and expand.
- Digital government can improve regulatory clarity and accessibility by automating processes and providing online access to regulations, thereby reducing uncertainty for businesses and fostering greater public trust and predictability.
- By implementing e-customs platforms and digital trade facilitation systems, Digital Government can streamline complex import/export processes, reducing paperwork and improving tracking.
- This contributes to greater economic resilience, helping MSMEs navigate macroeconomic volatility and potentially expand despite challenging conditions.
- The current inability to measure specific digital public services or trade infrastructure signifies an underdeveloped digital environment that needs to be built through digital government initiatives.

Sectoral Contribution to GDP and Resource Rents in Yemen

This bar chart illustrates the percentage contribution of major economic sectors (Agriculture, Industry excluding Rents, and Services) to Yemen's GDP, alongside the share of Total Rents, over the period 2016 to 2018

The indicators represent the value added by each sector as a percentage of GDP and the contribution of resource rents.





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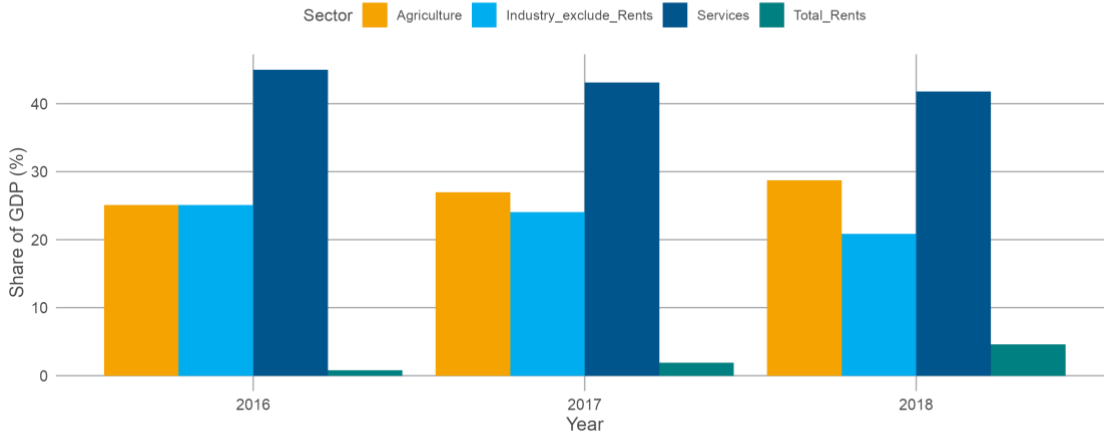
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Composition of GDP by Sector and Resource Rents in Yemen

Share of Major Value Added Sectors and Natural Resource Rents (% of GDP)



Data Source: World Bank Yemen Country Profile
Highest Sector Volatility: Total_Rents

Key Insights

1. The Services sector consistently constituted the largest proportion of Yemen's Gross Domestic Product (GDP), representing over 40% annually.
2. The Agriculture and Industry sectors accounted for substantial but smaller shares.
3. Total Resource Rents represented a minor percentage of GDP during this period.
4. This structure indicates that the Services sector is the predominant area of economic activity and value creation, suggesting that MSMEs operating within Services may benefit from the sector's scale but face significant competition.
5. The continued large share of Agriculture highlights its importance for MSMEs involved in primary production and related services

Volatility of Sectoral GDP Contributions in Yemen

This bar chart presents the Coefficient of Variation (CV) for the GDP share of various sectors and Total Rents between 2016 and 2018. The CV is measured as the standard deviation divided by the mean share.

A higher coefficient indicates higher instability in a sector's GDP share over time, while a low CV indicates stability

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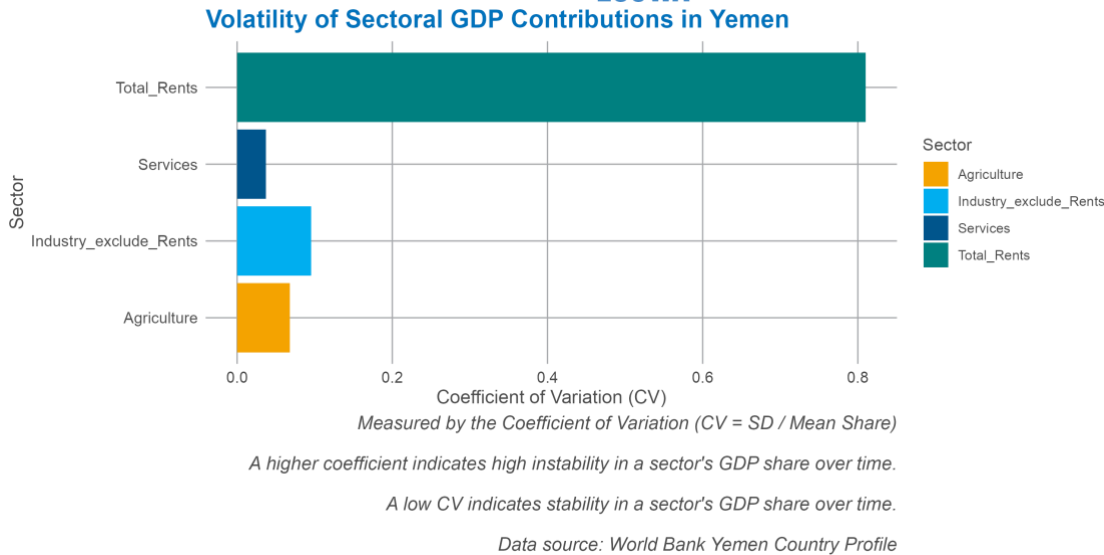


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Key insights

1. An analysis of the Coefficient of Variation (CV) for GDP share between 2016 and 2018 shows that Total Resource Rents exhibit extremely high volatility in their contribution to GDP.
2. The Services and Agriculture sectors demonstrate low coefficients of variation, indicating relative stability in their GDP contributions. This stability can be beneficial for MSMEs operating in these sectors, potentially making long-term planning and investment less risky from a macroeconomic perspective.
3. Nevertheless, this micro-level stability within a sector does not diminish the overall macro instability caused by conflict and currency depreciation.

Theme One Conclusion

The introductory economic overview highlights several critical factors impacting MSMEs in Yemen.

1. The significant depreciation of the local currency directly increases import costs.
2. The persistent trade deficit underscores Yemen's import dependency and suggests barriers for export-oriented MSMEs, potentially linked to high logistics costs.
3. While the Services and Agriculture sectors show relative stability in their GDP contributions, the overall macroeconomic environment remains challenging due to volatility and currency issues.

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4. Furthermore, the unavailability of B-READY indicators limits detailed analysis of regulatory and operational efficiency from this dataset, highlighting a crucial data gap.

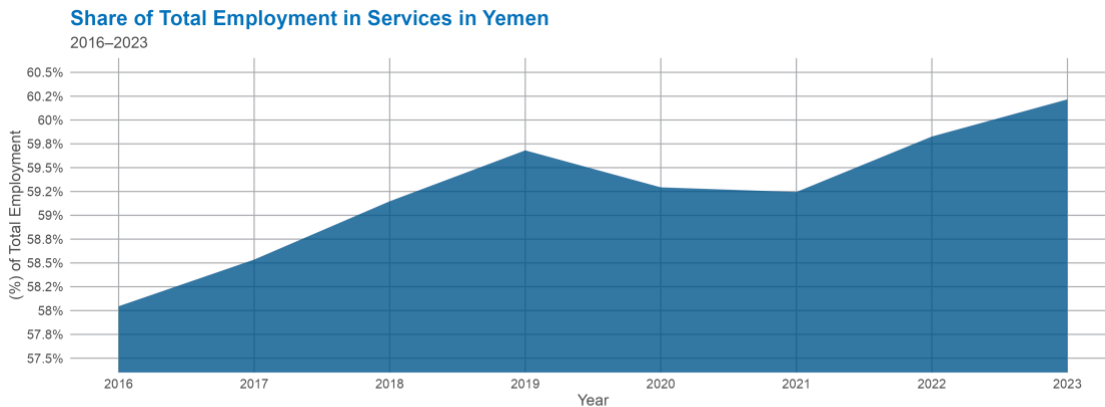
Theme Two: Lack of sector-specific specialized training

This section examines indicators related to the labour market and youth engagement, shedding light on the availability of a skilled workforce for MSMEs and the prevalence of skills gaps.

Employment Shares Over the Years by Economic Sector in Yemen

The area charts bellow illustrates the percentage share of total employment held by Agriculture, Industry, and Services sectors in Yemen from 2016 to 2023. These indicators reflect the distribution of the labour force across the main economic sectors.

Share of Total Employment in The Services Sector, 2016–2023



Source: World Bank Indicators dataset (derived from International Labour Organization/ ILOSTAT).
The services sector consists of wholesale and retail trade and restaurants and hotels; transport, storage, and communications; financing, insurance, real estate, and business services; and community, social, and personal services.





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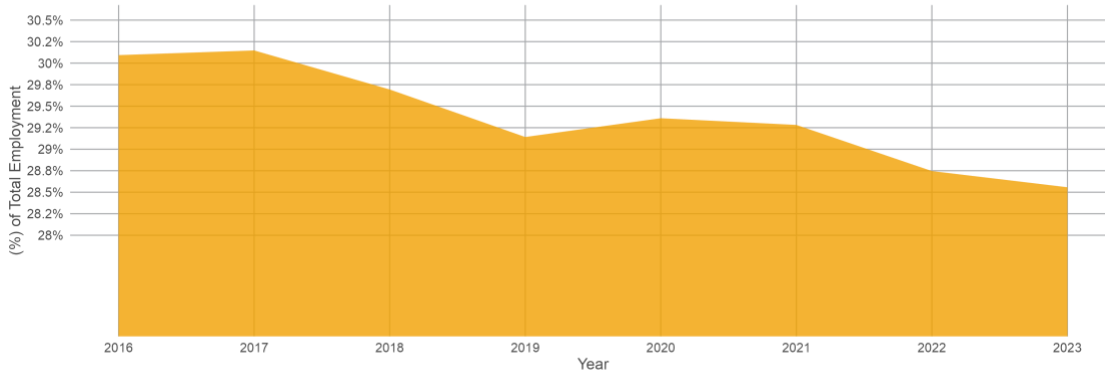
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Share of Total Employment in The Agriculture Sector, 2016–2023

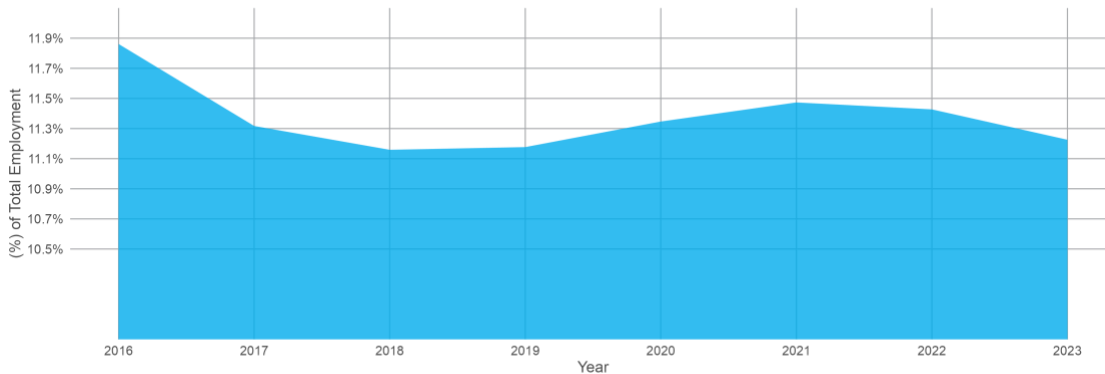
Share of Total Employment in Agriculture in Yemen
2016–2023



Source: World Bank Indicators dataset (derived from International Labour Organization/ ILOSTAT).
The agriculture sector consists of activities in agriculture, hunting, forestry and fishing

Share of Total Employment in The Industry Sector, 2016–2023

Share of Total Employment in Industry in Yemen
2016–2023



Source: World Bank Indicators dataset (derived from International Labour Organization/ ILOSTAT).
The industry sector consists of mining and quarrying, manufacturing, construction, and public utilities (electricity, gas, and water)

Key Insights

1. The Services sector consistently accounted for the largest share of employment, staying close to or slightly above 60%.
2. Agriculture employed a significant portion of the workforce, fluctuating around 30%, while the Industry sector had the smallest share.
3. The employment shares across these sectors show relative stability over this period.

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4. This distribution indicates that Services and Agriculture are primary sources of livelihoods and potential entrepreneurial activity, suggesting that a lack of sector-specific specialized training could limit the ability of individuals and MSMEs within these dominant sectors to adopt modern practices, improve efficiency, and specialize.

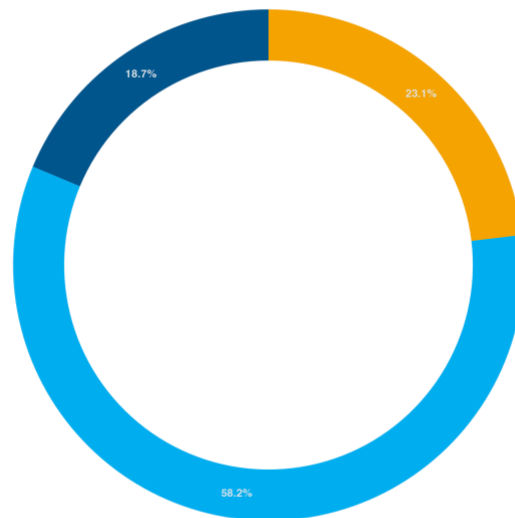
Sectoral productivity (Median value added per worker)

This donut chart illustrates the median labour productivity, measured as Value Added per Worker (constant 2015 US\$), for the economic sectors over the period 2016-2018

Productivity is a key measure of efficiency and value creation. Low labour productivity within a sector can directly indicate that workers, including entrepreneurs and their employees, lack the necessary skills, knowledge, or technology to operate effectively and generate higher value. Sector-specific training is designed to improve these very factors.

Median Labour Productivity by Economic Sector (Yemen, 2016–2018)

Low productivity in certain sectors could be an opportunity for improvement through digital initiatives



Sector ■ Agriculture, forestry, and fishing, value added per worker (constant 2015 US\$) ■ Industry (including construction), value added per worker (constant 2015 US\$) ■ Services, value added per worker (constant 2015 US\$)

Source: World Bank Indicators dataset, drawing on ILOSTAT for employment and World Bank national accounts/OECD data for value added. Percentages are calculated as each sector's median value added per worker divided by the sum of all sectoral median values, then multiplied by 100 for normalization.

Key Insights

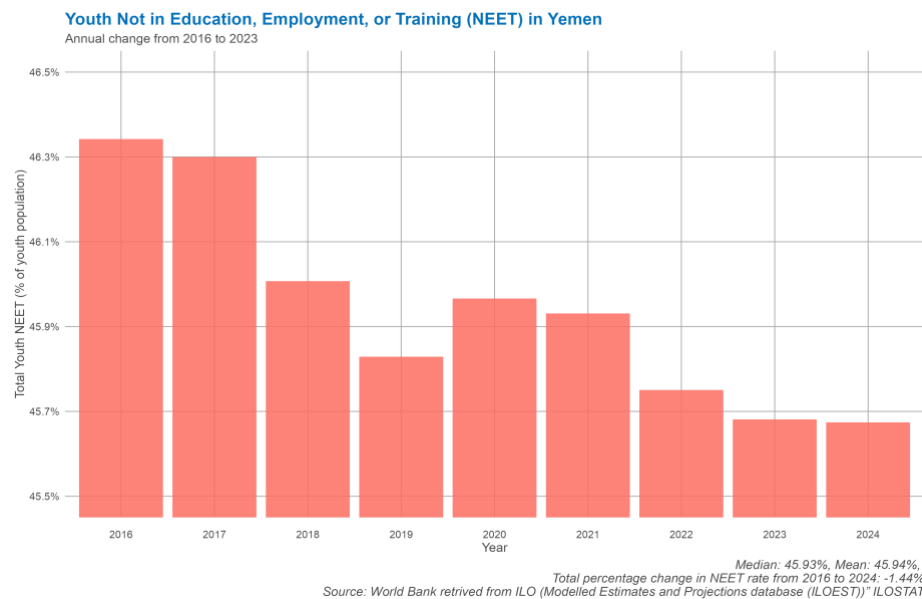
The productivity gap confirms what entrepreneurs raised during consultations: there's a lack of technical and specialized training, especially outside the services sector.

This highlights a direct correlation between observed economic performance and the perceived need for targeted skill development.

Overall picture of youth disengagement from work and education/training

This section explores indicators related to youth engagement, which can shed light on the availability of a skilled workforce for MSMEs. High rates of youth not in education, employment, or training (NEET) or high youth unemployment rates suggest a pool of potentially available labour but also highlight a challenge in integrating young people into productive economic roles.

Total Youth NEET





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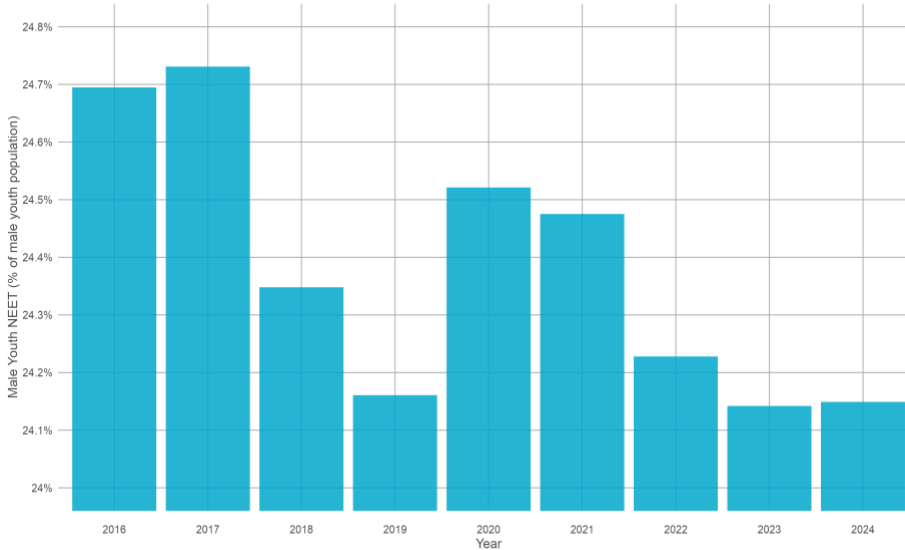
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Male Youth NEET

Male Youth Not in Education, Employment, or Training (NEET) in Yemen

Annual change from 2016 to 2024



Median: 24.35%, Mean: 24.38%

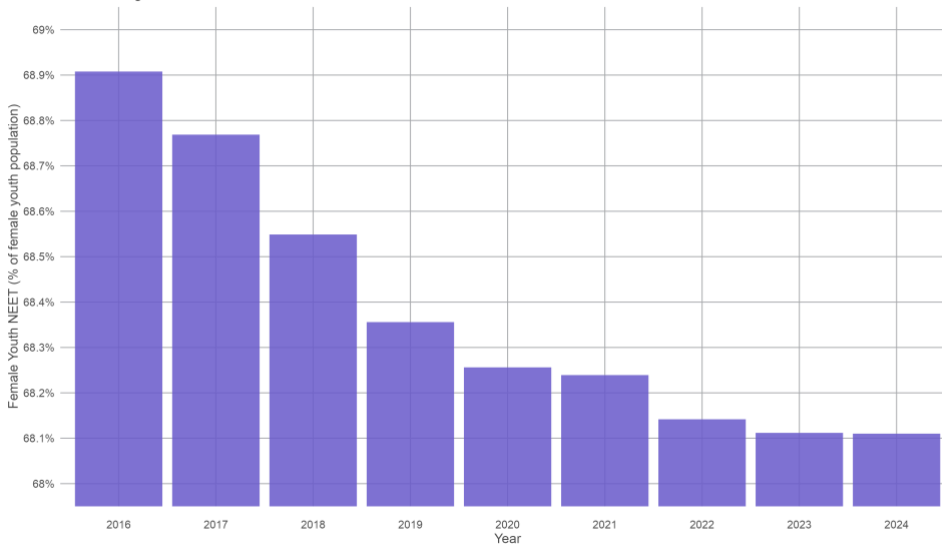
Total percentage change in NEET rate from 2016 to 2024: -2.21%

Source: World Bank retrieved from ILO (Modelled Estimates and Projections database (ILOEST))" ILOSTAT

Female Youth NEET

Female Youth Not in Education, Employment, or Training (NEET) in Yemen

Annual change from 2016 to 2024



Median: 68.26%, Mean: 68.38%

Total percentage change in NEET rate from 2016 to 2024: -1.16%

Source: World Bank retrieved from ILO (Modelled Estimates and Projections database (ILOEST))" ILOSTAT

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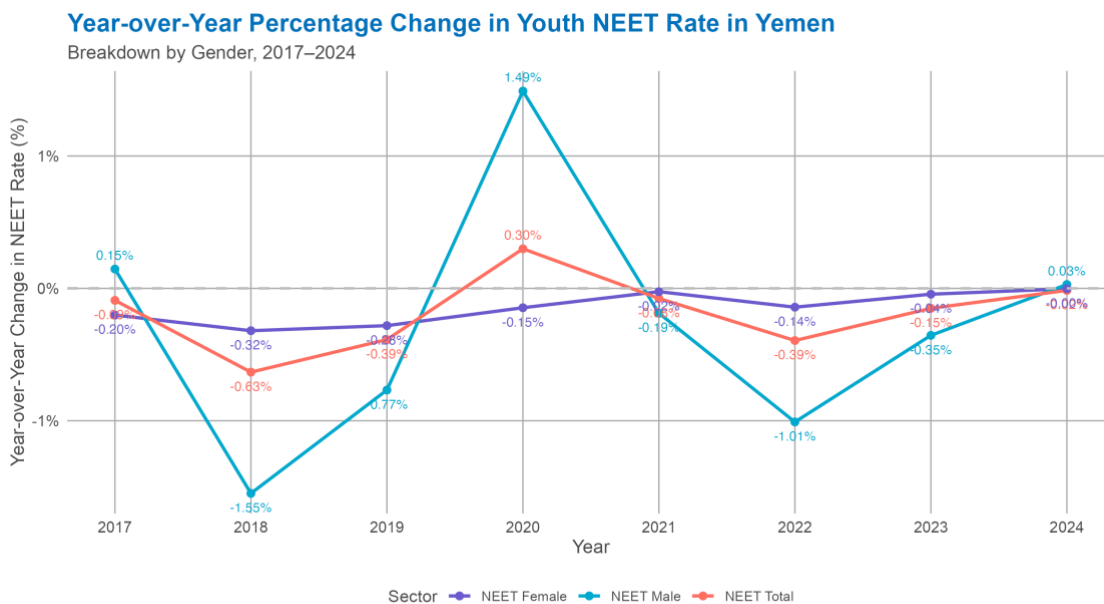


Key Insights:

1. Youth NEET rates are high across genders, particularly among women. This points to a significant underutilized labour force.
2. While this group represents a potential labour pool for MSMEs, they often lack the necessary skills and experience, reinforcing the problem of a lack of sector-specific specialized training.
3. Targeted training and support programmes could transform this challenge into an opportunity for MSME growth and reduced youth unemployment.

Annual Growth rates in Youth NEET Breakdown By Gender

The chart presents year-on-year percentage changes in NEET rates for total youth, male youth, and female youth in Yemen, calculated as the percentage difference from the previous year.



Source: World Bank (based on ILOSTAT estimates).
Indicator: Share of youth not in education, employment or training (% of youth population).
Plotted values calculated as the year-over-year percentage change in the NEET rate.

Key insights:

1. Youth NEET rates show significant year-on-year volatility across genders, reflecting instability in young people's access to education, employment, or training.
2. All NEET categories surged in 2020. This spike coincided with the COVID-19 pandemic, mass school closures, and disruption of informal livelihoods, affecting over 7.8 million children in Yemen. The pandemic exacerbated challenges imposed by Yemen's ongoing conflict and widespread flooding.

3. Male NEET rates show the largest fluctuations, suggesting heightened exposure to labour market shocks, likely due to male overrepresentation in MSME and informal sectors highly affected during crises.
4. Female NEET changes remain less volatile, reflecting persistent disengagement rather than reactive volatility, which suggests structural barriers.
5. Post-2020, NEET rates declined in 2021 and 2022, signaling some recovery, but a slight uptick in 2023 suggests fragile momentum.

Analysis of Relationships Among Youth Employment Statuses: NEET, Unemployment, and Self-employment

This section of the report examines the empirical relationships between key indicators of youth labour market engagement in Yemen:

- Youth Not in Education,
- Employment, or Training (NEET), Youth Unemployment, and
- Youth Self-employment.

Definitions

- NEET refers to the proportion of young people (typically aged 15 to 24, although definitions can vary to include ages 15 to 29) who are not participating in education, employment, or training.
- Unemployment refers to the share of the labour force who are without work but are available for and actively seeking employment. Youth unemployment specifically focuses on the 15-24 age group.
- Self-employment is a category of employment where remuneration depends directly on the profits from produced goods or services, and includes individuals working on their own account or with partners, such as employers, own-account workers, and members of producers' cooperatives.



Analysis of Relationships

Pearson Correlation Test Results

Comparison	Correlation	t_value	p_value	CI_Lower	CI_Upper
NEET vs. Unemployment	0.5102516	1.4532785	0.1963671	-0.3035748	0.8936157
NEET vs. Self-employment	-0.7857773	-3.1119225	0.0207978	-0.9592810	-0.1817327
Unemployment vs. Self-employment	-0.0852646	-0.2096182	0.8409020	-0.7451653	0.6590037

Variable 1	Variable 2	Significance
NEET	Unemployment	Not Significant
NEET	Self-employment	Significant
Unemployment	Self-employment	Not Significant

Interpretation:

- **Correlation between NEET and Self-employment:** The analysis found a strong, statistically significant negative relationship between Youth Self-employment and Youth NEET. This relationship is statistically significant, providing more robust evidence (within the confines of this dataset) that higher youth self-employment is associated with lower Youth NEET rates. **Economically, this suggests that self-employment acts as a pathway for young people to engage in productive activity, diverting them from being idle.**
- Other relationships in this model were found to be not statistically significant meaning the observed correlation could occur by chance.

Linear Regression:

A linear regression model was fitted to examine how Youth NEET is influenced by Youth Unemployment and Youth Self-employment simultaneously.

Collectively, Youth Unemployment and Youth Self-employment significantly explain some of the variation observed in Youth NEET rates.



Regression Coefficients: Yemen Model

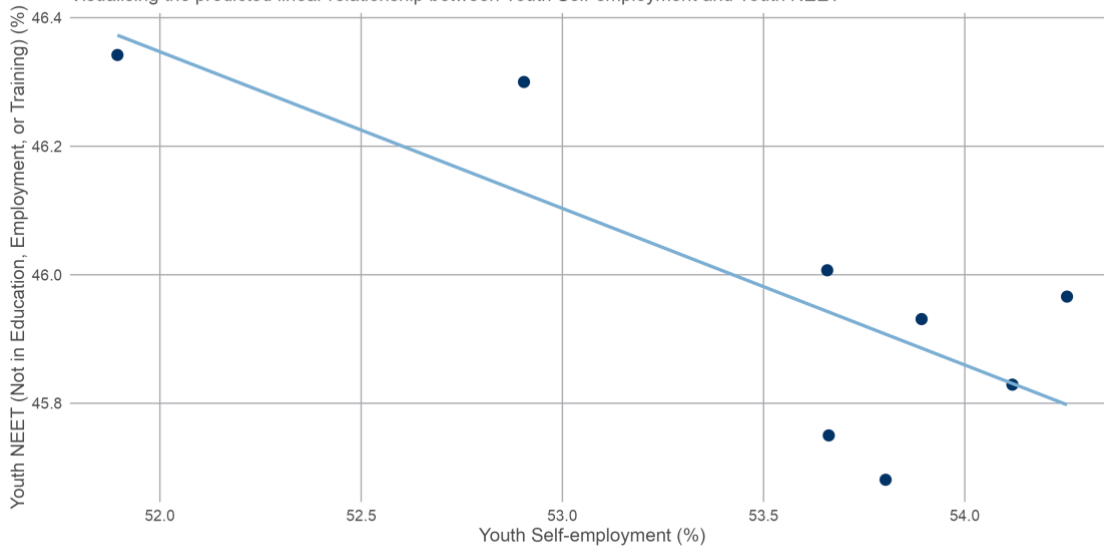
	Estimate	Std. Error	t value	Pr(> t)	Variable
(Intercept)	54.2445181	3.7991667	14.278004	0.0000304	(Intercept)
Unemployem ent	0.1244314	0.0537495	2.315022	0.0684771	Unemployment
Self- employment	-0.2319036	0.0598193	-3.876737	0.0116804	Self-employment

Model Performance Metrics

Metric	Value
Residual Std. Error	0.1217997
Multiple R-squared	0.8153577
Adjusted R-squared	0.7415008
F-statistic	11.0396943
p-value	NA

Relationship between Youth NEET and Self-employment in Yemen

Visualising the predicted linear relationship between Youth Self-employment and Youth NEET



The observed trend aligns with the finding that higher self-employment is associated with lower NEET rates.

rates that there is a tendency for Youth NEET percentages to be lower in years where Youth Self-employment percentages are higher.

Conclusion on Hypotheses

Despite the considerable limitations of the small sample size, Youth Self-employment emerged as the most statistically significant factor associated with lower Youth NEET rates in this analysis.

This provides empirical backing for the importance of supporting entrepreneurial activities among youth as a potential strategy to address youth disengagement in Yemen.

Theme Three: Financial Access and Conditions for Businesses

This theme directly addresses the challenges faced by entrepreneurs and MSMEs in Yemen regarding access to finance, specifically “Strict guarantee requirements and complex financing conditions” and “Lack of investment funds and reliance solely on loans”.

Lack of investment funds challenge

Foreign direct investment (FDI) are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments.

This series shows net inflows in the reporting economy from foreign investors, and is divided by GDP.





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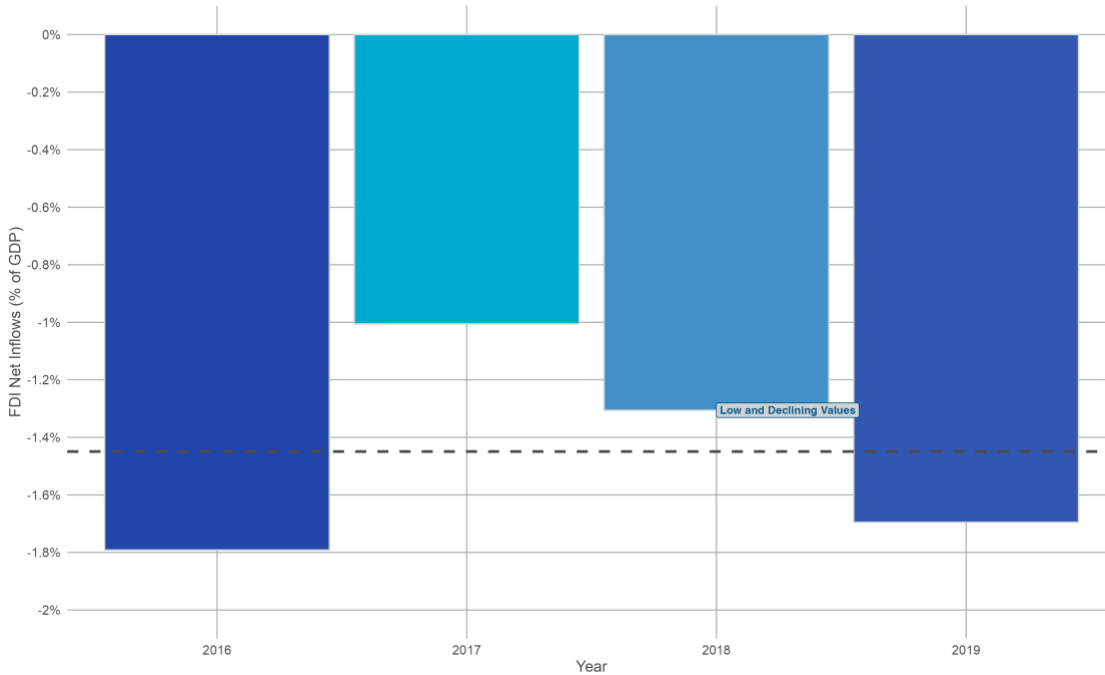
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Declining Foreign Direct Investment in Yemen (2016–2019)

Low or declining net inflows indirectly suggest a challenging investment climate overall



Insights:

1. Foreign Direct Investment (FDI) net inflows in Yemen show low or declining values (e.g., negative percentages of GDP from 2016-2019).
2. This trend indirectly suggests a challenging investment climate overall, which impacts the broader flow of capital pertinent to the financial environment for all businesses, including MSMEs.

CPIA ratings over time

A rating of 1 indicates low performance, while a rating of 6 indicates high performance in the respective policy or institutional area.

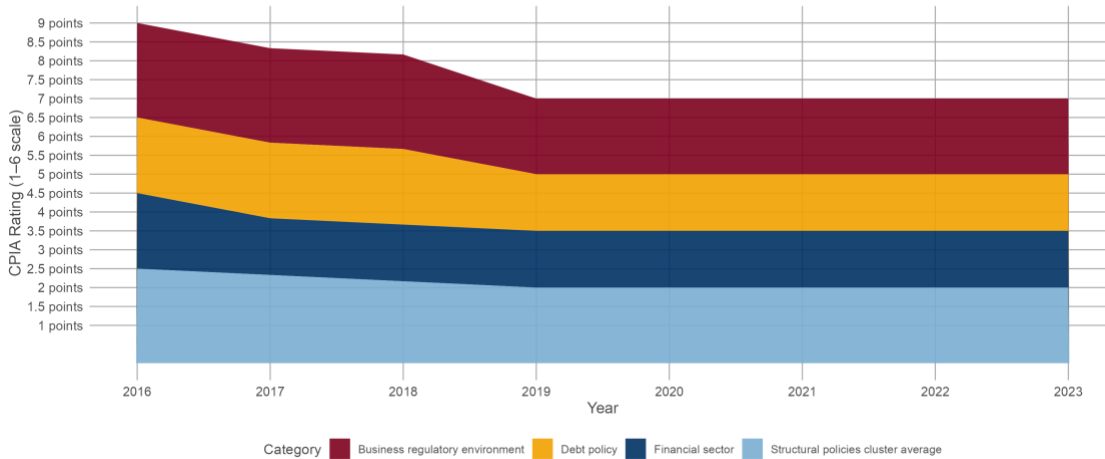
Yemen's CPIA ratings for Business regulatory environment, Structural policies cluster average, Financial sector, and Debt policy are consistently low, never exceeding 2.5 on the 1-6 scale. This means Yemen's performance in these critical policy and institutional areas is assessed as being on the lower end of the international range.

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Consistently Low CPIA Ratings in Yemen from (2016- 2023)

Low CPIA ratings provide quantitative evidence for the challenges affecting the business environment, financial access, and economic stability for businesses and MSMEs in Yemen



Source: World Bank Group, CPIA database

Implications:

1. A low CPIA business regulatory environment rating suggests that existing legal, regulatory, and policy frameworks may hinder private businesses rather than fostering investment and growth.
2. A low CPIA financial sector rating indicates potential weaknesses in the structure of the financial sector and the policies and regulations affecting it, directly relating to challenges firms face in accessing finance.
3. A low CPIA debt policy rating points to concerns about the effectiveness of debt management.

Theme Three Insights, Recommendations, and Implications for MSMEs

- The consistently low CPIA ratings provide quantitative evidence of underlying policy and institutional frameworks that are assessed at low performance levels, creating a challenging environment for MSMEs.
- Specifically, the low CPIA financial sector ratings strongly suggest significant challenges in financial access. The net outflows of FDI further underscore difficulties in attracting and retaining foreign capital, impacting the overall economic dynamism that benefits MSMEs.

Theme Four: Trade and Logistics Costs

This theme focuses on the challenge of “High customs and shipping costs” faced by businesses in Yemen.

CPIA Trade Rating

This rating, on a scale of 1 (low) to 6 (high), assesses how the policy framework supports trade in goods. It reflects the quality of essential infrastructure and the policy environment for trade.

Year	Value
2016	3.0
2017	3.0
2018	2.5
2019	2.5
2020	2.5
2021	2.5
2022	2.5
2023	2.5

Insights:

- Yemen's CPIA trade rating has remained consistently low at 2.5 from 2018-2023.
- This score, on a scale of 1 to 6 (where 1 is low performance), directly indicates a weak policy framework that significantly hinders international trade and leads to high costs for businesses.

Trends in LPI scores

The LPI itself is an interactive benchmark tool created by the World Bank that helps countries identify the challenges and opportunities they face in their performance on trade logistics and connect to global supply chains. The LPI overall score and its components are based on surveys of logistics professionals who assess countries on six core dimensions on a scale from 1 (low performance) to 5 (high performance).

The chart below displays Logistics Performance Index (LPI) scores for Yemen across six key dimensions for the years 2018 and 2022.





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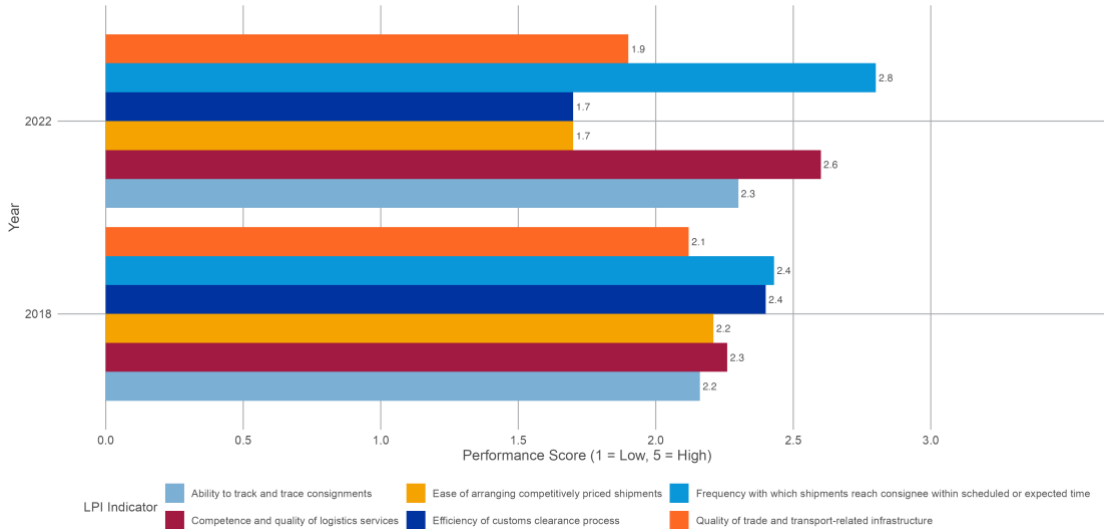
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Assessing Logistics Efficiency in Yemen

LPI scores (1=Low Performance, 5=High Performance) across six key dimensions. Scores reveal significant inefficiencies impacting trade operations and increasing business costs.

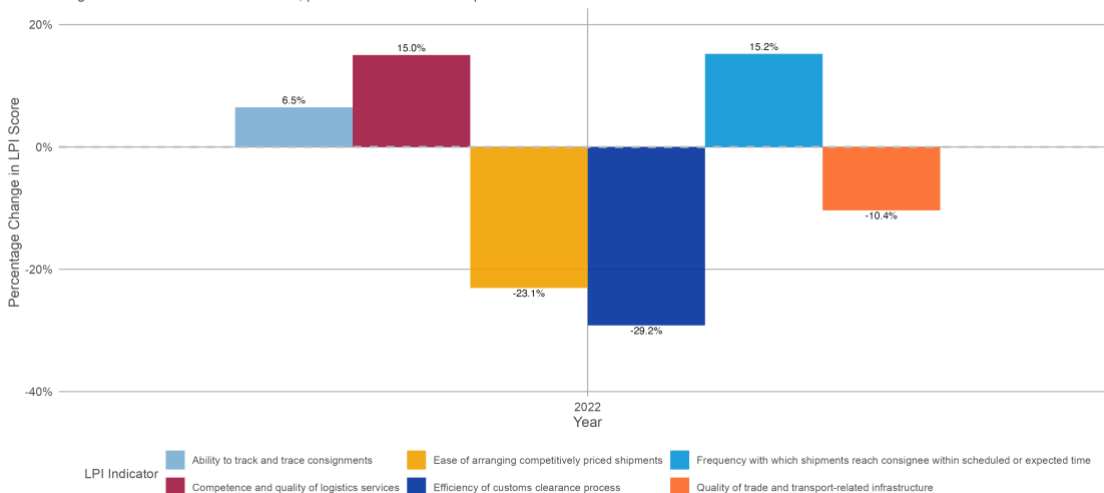


The percentage change in LPI scores between 2018 and 2022 for each of the six dimensions

A negative percentage change indicates a deterioration in the perceived performance for that logistics indicator over the period, while a positive percentage change indicates an improvement.

Change in Logistics Performance Index (LPI) Scores in Yemen

Percentage change in LPI scores (2018 to 2022) across six key dimensions. Negative values indicate deterioration, positive values indicate improvement.



Source: Logistics Performance Index (LPI), World Bank. Bars show percentage change in scores from 2018 to 2022, calculated relative to 2018 values.

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Insights:

1. The chart reveal significant operational inefficiencies.
2. LPI scores for Yemen are consistently low, generally remaining below 3.0 across all dimensions.
3. Between 2018 and 2022, crucial dimensions like “Efficiency of customs clearance process,” “Ease of arranging competitively priced shipments,” and “Quality of trade and transport-related infrastructure” have become progressively worse.
4. These low and worsening scores, based on perceptions of logistics professionals, directly translate to high costs and delays for Yemeni businesses attempting to move goods.

Theme Four Insights, Recommendations, and Implications for MSMEs

- The consistently low CPIA trade rating and the low LPI scores provide strong quantitative evidence of systemic inefficiencies and a challenging policy framework governing trade and logistics in Yemen.
- Inefficient customs processes and poor infrastructure contribute to longer lead times, delays, and increased operational costs for MSMEs, reducing their competitiveness.
- The complexity and risk associated with navigating inefficient logistics systems discourage MSMEs from participating in formal trade channels.
- These inefficiencies are often the result of manual processes, lack of online platforms for documentation and payment, and poor information flow.

Theme Five: Digital Infrastructure and E-commerce Readiness

This theme addresses critical challenges related to digital infrastructure and e-commerce readiness, including: “Limited electronic payment options and high fees,” “Reliance on social media instead of proper e-commerce platforms,” “Difficulty updating websites and receiving international payments,” “Lack of unified e-wallet systems,” and “Low public awareness of e-commerce benefits”.

Digital infrastructure is a foundational requirement for MSME growth and resilience.



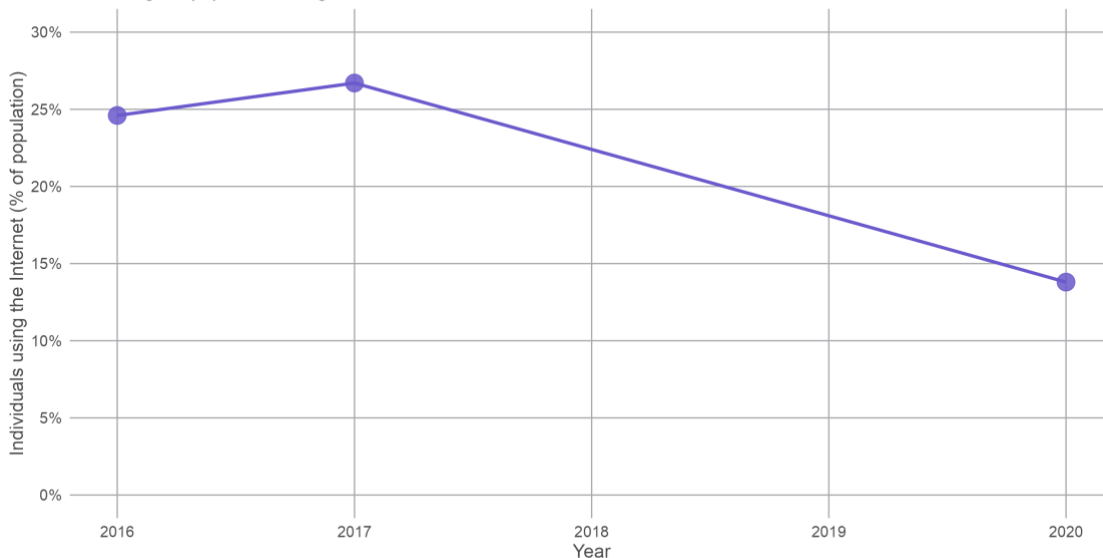
The Current State of Digital Access and Adoption

The following chart visualizes the trend in internet penetration, a key indicator of digital adoption, over available years. It is important to note that data availability for Yemen is limited, often due to the challenging operational environment shaped by the ongoing conflict.

Internet users are individuals who have used the Internet (from any location) in the last 3 months. The Internet can be used via a computer, mobile phone, personal digital assistant, games machine, digital TV etc. (World Bank definition)

Internet Penetration in Yemen: A Significant Decline (2016-2020)

Percentage of population using the internet, based on available data for 2016, 2017, and 2020.



Source: World Bank, International Telecommunication Union (ITU) World Telecommunication/ICT Indicators Database
Note: Internet penetration in Yemen saw an overall decline of approximately -43.9% between 2016 and 2020.

Key insights and implications:

1. Internet penetration in Yemen saw a sharp drop between 2016 and 2020. This presents substantial barriers to digital adoption and directly impacts e-commerce readiness.
2. A population with limited internet access faces reduced opportunities for online market engagement, access to digital payment systems, and participation in the digital economy.
3. This decline limits MSMEs' ability to modernize, expand their reach, and engage with wider markets.



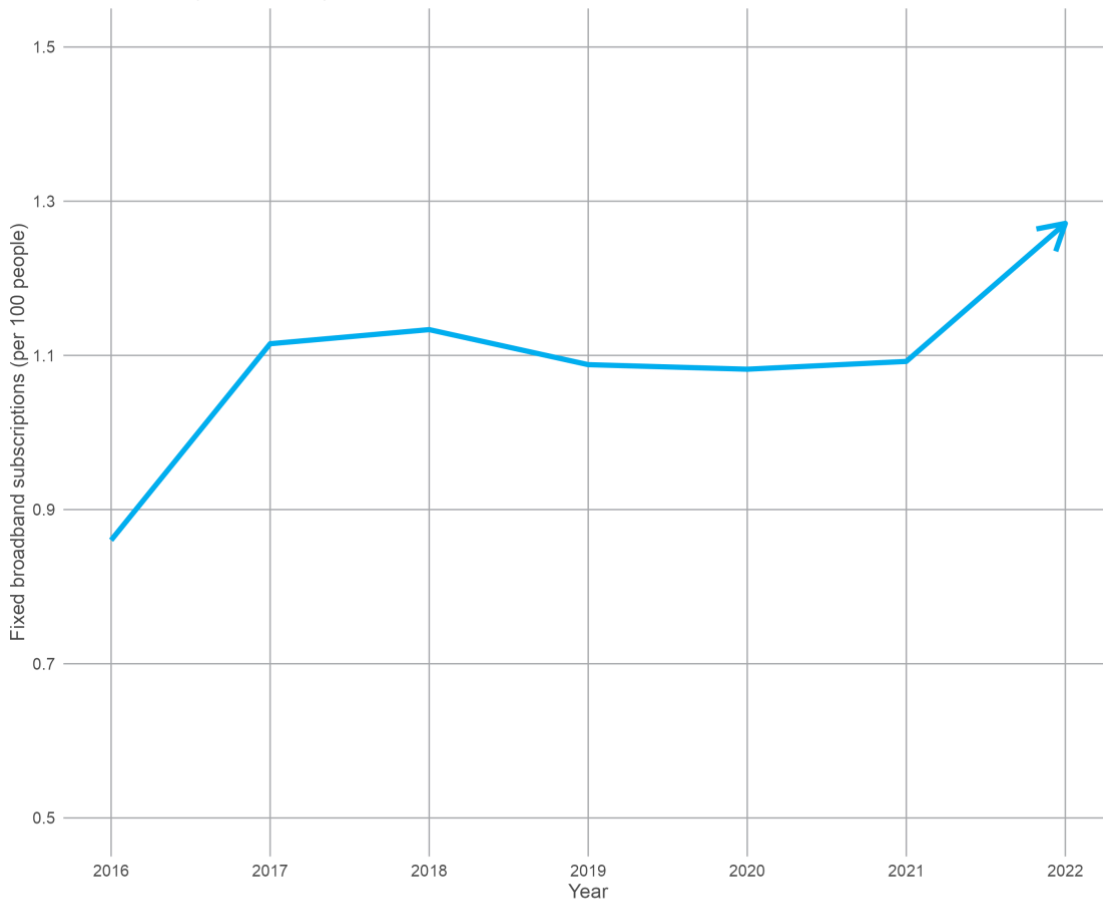
Yemen's Digital Challenge: Bridging the Broadband Gap for Business Growth

Fixed broadband subscriptions provide a more robust and stable form of internet connectivity compared to mobile-cellular networks. This refers to fixed subscriptions to high-speed internet (equal to or greater than 256 kbit/s), encompassing various wired and fixed wireless technologies for both residential and organizational use.

The following chart illustrates the trend in fixed broadband subscriptions per 100 people in Yemen.

Fixed Broadband Subscriptions in Yemen: Modest Growth (2016-2022)

Positive development in this specific area, even if the absolute numbers remain low.



Source: World Bank, International Telecommunication Union (ITU) World Telecommunication/ICT Indicators Database.

Key Statistics: Average: 1.09, Middle Value: 1.09, Values typically varied by: 0.121.

Relative Consistency: 0.111, Highest: 1.27.

Note: Fixed broadband subscriptions in Yemen saw an overall growth of approximately 47.8% (CAGR: 6.7%)

Key insights and implications:

1. Despite some progress, Yemen's fixed broadband access remains extremely low, posing significant challenges for its businesses.
2. From 2016 to 2022, fixed broadband subscriptions saw an overall growth of approximately 47.8%, with an average annual growth rate (CAGR) of 6.7%. However, the highest penetration observed was only 1.27 subscriptions per 100 people, highlighting severely limited connectivity.
3. This weak internet infrastructure creates major practical difficulties for MSMEs, leading to reliance on social media instead of dedicated e-commerce platforms, limited electronic payment options, and struggles with website updates or receiving international payments.
4. These issues directly contribute to higher trade and logistics costs, limiting MSMEs' ability to grow and access wider markets.

Mobile Connectivity in Yemen: A Shrinking Digital Gateway

Mobile cellular telephone subscriptions encompass access to a public mobile telephone service utilizing cellular technology, including both postpaid and active prepaid accounts, and primarily facilitate voice communications.





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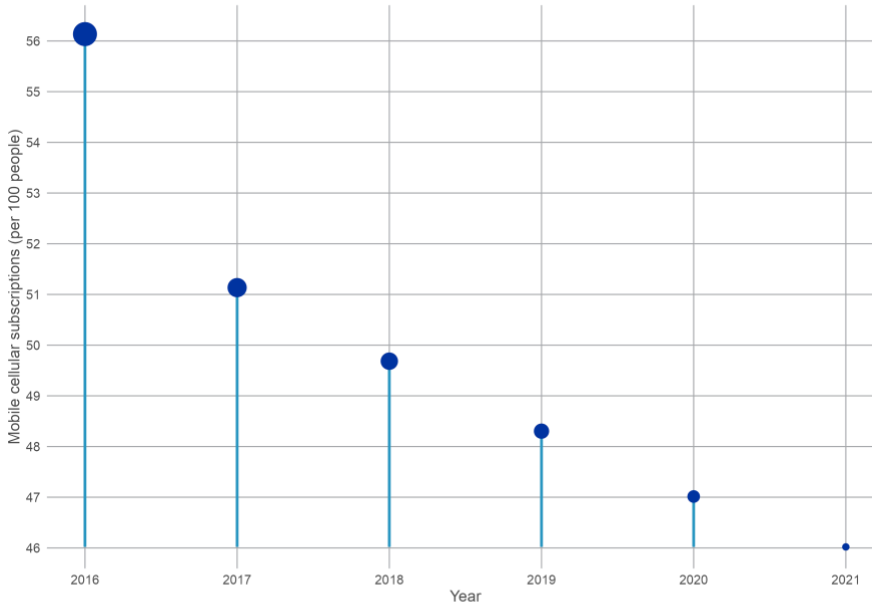
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Decline in Mobile Cellular Subscriptions in Yemen (2016-2021)

Subscriptions per 100 people, based on available data.



Source: World Bank, International Telecommunication Union (ITU) World Telecommunication/ICT Indicators Database.
Key Observations (2016-2021): Average: 49.7, Middle Value: 49.0,
Values typically varied by: 3.64, Relative Consistency: 0.0732, Highest: 56.1.
Note: Mobile cellular subscriptions in Yemen saw a significant overall decrease of approximately 18.0%
(Average Annual Decline: 3.9%) between 2016 and 2021.

Key insights and implications:

1. Mobile cellular subscriptions in Yemen experienced a significant overall decrease of approximately 18% between 2016 and 2021.
2. This troubling retreat in mobile cellular connectivity impedes widespread digital access for individuals and businesses alike.
3. These challenges are compounded by existing digital infrastructure gaps, such as limited electronic payment options with high fees, reliance on social media instead of proper e-commerce platforms, difficulty updating websites and receiving international payments, and a lack of unified e-wallet systems.
4. These practical digital difficulties for MSMEs suggest a lack of robust e-commerce infrastructure or adoption.

Yemen's Digital Leap: strengthening Online Security for a Connected Future

Secure internet servers per million people: provide a vital measure of how effectively a country's digital services are protected. A higher number signifies an enhanced capacity to

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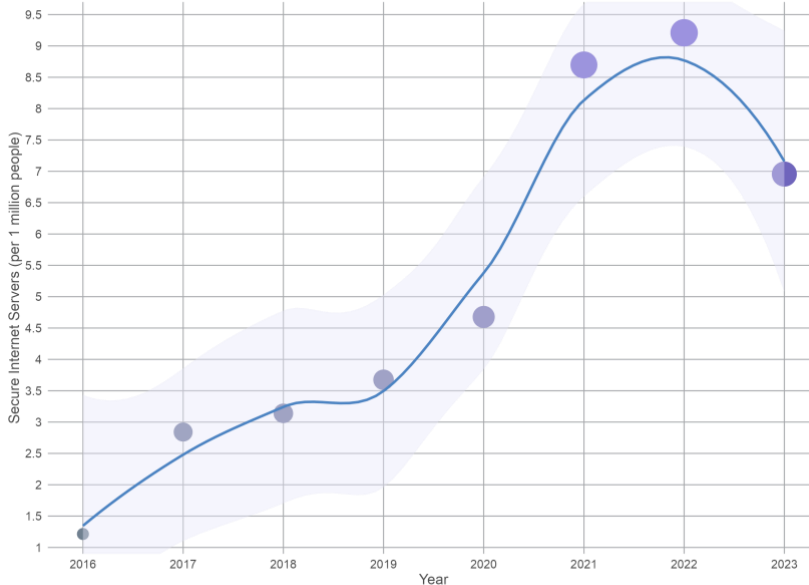
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handle secure online transactions and facilitate data exchange, which is essential for digital innovation and overall digital growth.

Yemen's Digital Security Boost: Secure Internet Servers on the Rise (2016–2023)

Strong positive trend in secure internet servers in Yemen



Data Source: Netcraft and World Bank population estimates.
Key Observations (2016–2023): Average servers: 5.05 per million people. Values ranged from 1.21 to 9.21 per million people.
Note: Secure internet servers in Yemen saw a significant overall increase of over 472%. Average yearly growth of 28.3%.

Key insights and implications:

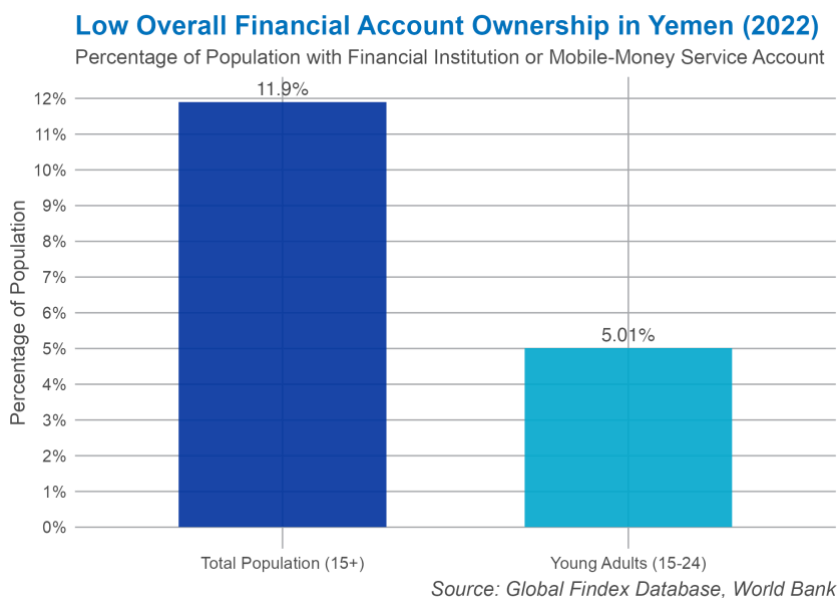
1. In contrast to declining connectivity in some areas, Yemen's digital landscape shows a remarkable increase in secure internet servers.
2. From 2016 to 2023, secure internet servers (per 1 million people) saw an overall increase of over 472%, with an average yearly growth of 28.3%.
3. This strong positive trend in secure internet servers is a significant development, as it is crucial for establishing trust in online activities, including e-commerce and various digital services.
4. This robust infrastructure is indispensable for building trust in online activities and plays a crucial role in improving the environment for businesses, especially MSMEs, directly supporting efforts to enhance the business regulatory environment.

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Account ownership at a financial institution or with a mobile-money-service provider

The indicator, “Account ownership at a financial institution or with a mobile-money-service provider” directly indicates readiness for digital payments, which is a vital component of digital government services and e-commerce. This indicator also provides context on the broader financial landscape, which can affect business conditions.

It reflects the proportion of the population aged 15 and above who hold an account at a financial institution or actively use a mobile money service



Key insights and implications:

1. Data on “Account ownership at a financial institution or with a mobile-money-service provider” indicates low percentages for the total population and even lower for young adults.
2. These figures highlight a significant gap in digital payment adoption potential.
3. These low percentages suggest that widespread adoption of secure online transactions and digital services, including e-commerce, faces a notable barrier.
4. This aligns with qualitative challenges such as ‘Limited electronic payment options and high fees’ and a ‘Lack of unified e-wallet systems’, underscoring the practical difficulties faced by businesses and individuals in Yemen’s digital economy.

5. Without a significant portion of the population having access to these basic financial tools, businesses will continue to rely on less formal methods like social media for commerce

Digital Government: A Strategic Pathway for Yemen's MSME Ecosystem

The current economic and operational environment for MSMEs in Yemen is marked by significant hurdles in trade, logistics, digital infrastructure, and governance, as clearly evidenced by available data.

1. Consistently Low Trade Policy Framework: Such a low rating highlights the underlying systemic inefficiencies that businesses face in cross-border operations.
2. Deteriorating Logistics Efficiency: These inefficiencies are often exacerbated by manual processes, lack of online platforms for documentation and payment, and poor information flow.
3. Extremely Limited Connectivity: This severely limited connectivity poses significant challenges for businesses seeking to modernize, conduct online transactions, or participate in wider markets.
4. Underdeveloped Secure Online Environment: The overall low numbers of secure internet servers (per 1 million people) historically indicate a critical deficit in the secure online infrastructure necessary for reliable e-commerce and sensitive digital transactions. This impacts trust and the potential for digital business growth.
5. Qualitative Challenges to Digital Adoption: Beyond basic access, Yemeni businesses face practical digital difficulties including limited electronic payment options with high fees, a reliance on social media instead of proper e-commerce platforms, challenges in updating websites and receiving international payments, and a lack of unified e-wallet systems. There is also low public awareness of e-commerce benefits. These points, derived from stakeholder feedback, underscore the practical hurdles to digital business.
6. Low Financial Account Ownership: The data on account ownership at a financial institution or with a mobile-money-service provider indicates a foundational barrier to widespread digital payment adoption. This is a vital component of digital government services and e-commerce.



7. Challenging Business Regulation: Indicates that the existing legal, regulatory, and policy frameworks often hinder private businesses rather than fostering investment and growth.
8. Systemic Governance Issues: These are fundamental systemic issues that create a challenging environment for implementing and sustaining digital initiatives.
9. The 'Absence of Data' as Evidence: Crucially, B-READY indicators are explicitly unavailable (N/A values) for Yemen. The very inability to measure these specific digital aspects is, in itself, powerful evidence of an underdeveloped digital environment that urgently needs to be built. This highlights the current situation; Yemen is currently unable to even benchmark itself against global digital business standards.

Digital Government

Digital Government represents a transformative approach that can directly address these data-backed challenges, enhancing the environment for MSMEs in Yemen.

- By implementing e-customs platforms and digital trade facilitation systems, Digital Government can dramatically simplify complex import/export processes, significantly reducing paperwork, enabling online payments, and improving tracking. This directly combats the low LPI scores in customs efficiency, ease of shipments, and tracking observed in the data. The resulting reduction in operational friction and costs can boost business resilience and expansion, even amidst macroeconomic volatility.
- A government-led digital transformation can drive essential investments in digital infrastructure, leading to enhanced internet and mobile penetration. Furthermore, it can facilitate the standardization and expansion of digital payment systems, directly addressing the lack of unified e-wallets and limited electronic payment options currently faced by businesses. This fosters a more fertile ground for e-commerce, allowing businesses to move beyond reliance on less formal platforms like social media. It can also facilitate the development of secure online environments, crucial for building trust in online transactions and enabling e-commerce to move beyond informal platforms.
- Digital Government promotes regulatory clarity and accessibility by automating processes and providing online access to regulations, which helps reduce uncertainty for businesses and fosters greater public trust and predictability.



Conclusion: A Strategic Path Forward for Yemen

The data highlights the severe challenges faced by Yemeni MSMEs due to underdeveloped digital infrastructure, inefficient trade and logistics, a burdensome regulatory environment, and limited financial access.

The absence of B-READY data for Yemen further underscores the current digital deficit.

Digital Government offers a transformative solution by streamlining processes, enhancing connectivity, fostering secure online transactions, and improving overall governance.

Given Yemen's complex context, implementing such a strategy requires external expertise and resources.

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