

1И//671868К(039)

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT

UNCTAD



INFORMATION ECONOMY REPORT 2017

DIGITALIZATION, TRADE AND DEVELOPMENT



UNITED NATIONS



CONTENTS

NOTE	ii
PREFACE	iii
FOREWORD	iv
ACKNOWLEDGEMENTS	v
LIST OF ABBREVIATIONS	xii
OVERVIEW	xiii

CHAPTER I AN EVOLVING DIGITAL ECONOMY 1

A. THE EVOLVING DIGITAL ECONOMY MATTERS FOR DEVELOPMENT	3
B. KEY TECHNOLOGIES UNDERPINNING THE DIGITAL ECONOMY	3
1. Advanced robotics	4
2. Artificial intelligence	5
3. Internet of Things: From embedded sensors to smartphones	5
4. From mainframes to cloud computing	6
5. Big data analytics: Making sense of chaos	6
6. Three-dimensional printing	7
7. Digital payment systems.....	7
8. The importance of interoperable systems and platforms.....	8
C. WHO STANDS TO GAIN FROM THE EVOLVING DIGITAL ECONOMY?	11
D. ROADMAP TO THE REMAINDER OF THE REPORT.....	13

CHAPTER II MEASURING THE EVOLVING DIGITAL ECONOMY 15

A. ICT ACCESS AND USE BY ENTERPRISES AND INDIVIDUALS.....	17
1. Digital divides remain in several areas	17
2. Business use of ICTs: Small enterprises are lagging behind	20
3. Lack of trust deters household use of ICTs for e-commerce	22
B. THE ICT SECTOR	22
1. Production of ICT goods and services	22
a. Production of ICT services	22
b. Production of ICT goods.....	22
2. ICT-related employment and occupations.....	24
C. THE GROWING ROLE OF E-COMMERCE.....	27
D. TRADE ASPECTS OF THE DIGITAL ECONOMY	28
1. Trade in ICT services	28
2. Trade in ICT-enabled services	30
3. Trade in ICT goods.....	30
4. Cross-border e-commerce	32
E. MEASURING NOVEL ASPECTS OF THE EVOLVING DIGITAL ECONOMY	35
F. CONCLUSIONS	36

CHAPTER III	DIGITALIZATION, TRADE AND VALUE CHAINS	41
A.	THE INTERNET AS A FACILITATOR OF MORE INCLUSIVE TRADE	43
B.	ONLINE WORK AND TRADE IN TASKS.....	47
1.	The rise of digital labour platforms	47
2.	Cloud work and trade in tasks.....	47
a.	Opportunities presented by cloud work.....	50
b.	Challenges relating to cloud work	50
C.	DIGITALIZATION, VALUE CHAINS AND SMALL BUSINESSES IN DEVELOPING COUNTRIES.....	51
1.	The role of global value chains.....	51
2.	Impact of different kinds of digitalization of GVCs	52
a.	Thintegration.....	52
b.	Platform digitalization	53
i.	Platforms in agriculture	53
ii.	Platforms in tourism.....	54
iii.	Use of global platforms.....	55
c.	Full digitalization.....	55
i.	Full digitalization in agriculture	55
ii.	Full digitalization in garments production.....	56
3.	Who gains from the digitalization of GVCs?	56
D.	CONCLUSIONS.....	57
CHAPTER IV	THE DIGITAL ECONOMY, JOBS AND SKILLS	61
A.	HOW WILL DIGITALIZATION TRANSFORM JOBS?.....	63
B.	WHAT WILL BE THE OVERALL JOB IMPACT OF DIGITALIZATION?.....	64
C.	NEED FOR NEW SKILLS.....	65
D.	CONCLUSIONS.....	67
CHAPTER V	INTERNATIONAL TRADE AGREEMENTS AND INTERNET GOVERNANCE.....	69
A.	INTERNATIONAL TRADE AGREEMENTS AND E-COMMERCE	71
1.	Regional and bilateral trade agreements	71
2.	Plurilateral agreements	71
3.	Multilateral discussions	72
B.	THE NEED FOR BRIDGING TRADE AND INTERNET POLICYMAKING	72
1.	Internet governance and multi-stakeholder involvement	72
2.	The Internet community's criticism of trade deals	74
3.	Options for enhancing the trade and Internet policy dialogue	75
a.	Non-treaty-making intergovernmental forums	75
b.	Inclusive dialogue for consensus-building.....	75
c.	Intergovernmental trade policymaking track	76
C.	CONCLUSIONS.....	77



CHAPTER VI	POLICIES FOR TRADE AND DEVELOPMENT IN THE DIGITAL ECONOMY	79
A.	COPING WITH THE CROSS-CUTTING NATURE OF THE POLICY CHALLENGE.....	81
B.	REDUCING THE DIVIDES IN DIGITAL TECHNOLOGY USE.....	83
C.	ENABLING SMALL BUSINESSES TO COMPETE IN THE DIGITAL ECONOMY.....	84
1.	Facilitating MSME participation in value chains	84
2.	Adapting trade promotion to the digital economy	84
3.	Trade logistics in the digital economy	85
D.	DEVELOPING SKILLS FOR THE DIGITAL ECONOMY.....	87
1.	The changing role of policies	87
2.	Policies to develop skills for the digital economy.....	90
3.	Policies to match the supply of and demand for digital skills.....	91
4.	The time to act is now	92
E.	GOVERNING CROSS-BORDER DATA FLOWS	93
F.	SCALING UP SUPPORT TO DEVELOPING COUNTRIES.....	96
REFERENCES		102