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Government of Malawi is currently championing the reformulation of its long term transformation vision, the Malawi 2063 to replace the Vision 2020. Over the past years, Government has been implementing the medium-term development strategy, the Malawi Growth and Development Strategy III (MGDSIII) that recognizes that ICT as a catalyst in accelerating socio-economic growth as well as an enabler for poverty reduction and wealth creation. At the same time, Government through the Ministry of Information is in the process of revising the National ICT Policy of 2013 in order to take stock and align its objectives to the rapid advancements in the ICT sector.

In order to ensure that ICT plays the pivotal role, Government through the Ministry of Information and the Malawi Communications Regulatory Authority (MACRA) aim at ensuring universal access to ICT services through provision of reliable and affordable ICT services in Malawi. This vision is given more impetus by the Sustainable Development Goals (SDGs) and emergence of the digital economy which has led to increase in ICT infrastructure and network deployment and services uptake mainly delivered by the enterprises and companies to the citizenry.

The 2020 National Enterprise Survey report presents the baseline findings for the access and use of ICT services by enterprises in the country. The main objective of the survey is to measure the access to and use of ICT by small, medium and large enterprises. The results of the survey will provide a baseline statistics which is important in providing evidence based policy decision making to Government as well as useful information to investment decisions of business players, investors and potential investors.

The baseline indicators contained in this survey report assess on the availability of ICT services in business premises, use of ICT infrastructure and application, status of digital financial services, level of e-services such as e-commerce and e-procurement, status of cyber-security in the enterprises, awareness of national ICT policy, and existence of internal ICT policies.

Henry Silika
Acting Director General
Malawi Communication and Regulatory Authority



The National Statistical Office (NSO) has been working with the Ministry of Information and the Malawi Communication Regulatory Authority (MACRA) in conducting ICT Surveys since 2014. This report presents results of the National Enterprise Survey 2019 in Malawi that was conducted from October to December 2019.

The main objective of the survey was to collect and analyze data on the accessibility and usage of ICT services by enterprises in Malawi following the internationally agreed ICT indicators as defined by the International Telecommunications Union (ITU) and the World Summit on Information Society (WSIS).

The results of the National Enterprise ICT Survey 2019 will assist in providing baseline indicators on availability of ICT, access and use of ICT services and understanding challenges encountered by enterprises in accessing and using ICT services. The collaboration between NSO and MACRA in collaboration with the Ministry of Information in data generation has been very productive as it has provided a great opportunity for capacity building in both institutions in data collection, processing and analysis. It has also enabled NSO to live up to its motto of providing “Statistics at the fingertips of the users” and its mission of providing high quality and timely statistical information through carrying out of censuses and surveys, setting statistical standards and promoting the dissemination and use of statistics for policy formulation, decision making and monitoring and evaluation of development programmes in order to spur socio-economic growth and development.

I would like to express my appreciation to the World Bank and PPPC for the financial support to the National Enterprise Survey 2019. Let me acknowledge the dedication and professionalism portrayed by the staff from NSO and MACRA in handling the survey. My gratitude also goes to the field teams and enterprises for taking their time in responding to the survey questions.

It is the wish of Government that the results of this survey go a long way to assist in the formulation of ICT policies that promote adequate access to ICTs for everyone.

Mercy Kanyuka (Mrs.)
Commissioner of Statistics

EXECUTIVE SUMMARY

Nation Enterprise Survey 2019 collected information on access and use of ICT services and products such as telephones, facsimiles, computers, postal services, digital financial services, cyber security and electrical and electronic waste management. The following are key findings:

- Overall, 74.0 percent of enterprises had a dedicated mobile telephone for business purposes. About 80 percent of these used mobile telephones for receiving orders while 69.4 percent used them for placing orders.
- About 75 percent of all enterprises used computers in their daily operations. The proportion of female employees using computers was 32.5 percent while for male employees was 18.8 percent.
- Overall, 70.2 percent of the enterprises had internet in their premises. About 87 percent of large scale enterprises, 69.2 percent of medium scale enterprises and 45.1 percent of small scale enterprises had internet in their premises.
- In total 29.8 percent of the enterprises reported they had an active website. Overall, 50.6 percent of enterprises hosted their websites locally while 49.4 enterprises hosted their websites internationally.
- Overall, 15.3 percent of the enterprises used cloud computing. About 72 of the enterprises used cloud computing for data storage, 71.4 percent used the service for email and messaging and 42.0 percent used services for application hosting.
- Overall, 13.3 percent of the enterprises used IoT devices in 2019. About 43 percent of enterprises that used IoT devices used an application to manage their devices. .
- In total, 33.0 percent of the enterprises engaged in e-commerce activities. Large scale enterprises had the largest proportion of e-commerce uptake at 42.7 percent followed by medium scale enterprises at 30.7 percent and small scale enterprises at 21.8 percent.
- Overall, 23.2 percent of enterprises had in place an ICT security policy. Among the large scale enterprises, 39.2 percent had an ICT Security Policy in place followed by medium scale enterprises at 17.9 percent and 8.0 percent for small scale enterprises.
- About 70 percent of the enterprises used courier services. Large scale sector enterprise had the highest proportion (85.9 percent) of enterprises that used courier services followed by medium scale enterprises at 70.0 percent of and small scale enterprises at 46.0 percent.
- The results indicate that 24.9 percent of all enterprises were aware of how to dispose of electronic waste. About 32percent of the enterprises reported to have an e-waste management policy in place.

TABLE OF CONTENTS

FOREWORD	ii
PREFACE	iii
EXECUTIVE SUMMARY	iv
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	x
ABBREVIATIONS, ACRONYMS AND SYMBOLS	xiii
1: INTRODUCTION / BACKGROUND	1
1.2 Main Objective of the Survey	1
1.2.1 Specific Objectives of the Survey	1
2: USE OF TELEPHONE BY ENTERPRISES	2
2.1 Use of Mobile Telephones	2
2.1.1 Enterprises with Mobile Telephones	2
2.1.2 Use of Mobile Telephones in Receiving Orders	3
2.1.3 Use of Mobile Telephones in Placing Orders	4
2.1.4 Use of Mobile Money Platforms	6
2.1.5 Enterprises with Mobile Payment Accounts	8
2.1.5.1 Enterprises with Bill Payment Account	8
2.1.5.2 Enterprises with Till/ Merchant Account	9
2.1.6 Enterprises with Mobile Money Account	11
2.1.7 Payments Received Using Mobile Payments and Mobile Money Account	13
2.1.8 Challenges Encountered by Enterprises with Mobile Payment and Mobile Money Accounts	14
2.1.9 Use of Mobile Banking Platforms	14
2.1.10 Challenges Encountered when Using Mobile Banking	16
2.2 Use of Fixed Telephone	16
2.2.1 Enterprises with Fixed Telephones	16
2.2.2 Enterprises Receiving Orders using Fixed Telephones	18
2.2.3 Enterprises Placing Orders Using Fixed Telephones	19
2.2.4 Orders Received and Placed using Fixed Telephones	21
2.2.5 Challenges Encountered When Receiving and Placing Orders via Fixed Telephones	22
2.3 Use of Facsimile (Fax)	23
2.3.1 Enterprises with Facsimile	23
2.3.2 Enterprises Receiving Orders using Facsimile	24
2.3.3 Enterprises Placing Orders Using Facsimile	24
2.3.4 Orders Received and Placed using Facsimile	25
3: USE OF COMPUTERS AND OTHER DEVICES	26
3.1 Use of Computers	26
3.2 Employees using a Computer Routinely for Office Use	27
3.3 Employees Provided with ICT Equipment	29
4: ACCESS AND USE OF INTERNET	31
4.1 Enterprises with Internet Connectivity	31
4.2 Enterprises with Access to Internet for Official Purpose	32
4.3 Employees Use of Internet for Business Purpose	34
4.4 Use of Local Area Network (LAN)	35
4.5 Enterprise Activities Performed Using the Internet	36
4.6 Use of e-Government services	36

4.7 Use of Internet Banking	37
4.7.1 Challenges faced with internet banking	39
4.8 Enterprises Using Intranet	39
4.8.1 Enterprises that Used Intranet to Share Information	40
4.8.2 Use of Specialised Application	41
4.9 Enterprises Using Extranet	42
4.9.1 Systems Used for Placing/ Receiving Orders	43
4.9.2 Enterprises that used Computer Systems to Place or Receive Orders by Type of Connection.....	44
4.10 Use of Website	45
4.10.1 Enterprises with an Active Website	45
4.10.2 Enterprise Web Domain's Used	46
4.10.3 Web Hosting	47
4.10.4 Type of Website Features	48
4.10.5 Use of Business E-mail Address	50
4.10.6 Use of Social Networking Websites	51
4.11 Use of Cloud Computing	52
4.11.1 Enterprises using Cloud computing	52
4.11.2 Cloud Computing Services used	54
4.11.3 Benefits of Using Cloud Computing Services	55
4.11.4 Reasons for Not Using Cloud Computing	56
4.11.5 Plan to Adopt Cloud Computing in Future	57
4.12 Use of Internet of Things (IoT)	57
4.12.1 Enterprises that used any IoT products	57
4.12.2 Use of Application to manage IoT Devices	58
4.12.3 Type of Security Products Used to Protect IoT Devices	59
5: ELECTRONIC COMMERCE	60
5.1 Electronic Transactions Act	60
5.2 Uptake of e-Commerce	61
5.3 Online Purchases	62
5.3.1 Placed Online Orders	62
5.3.2 Delivery of Purchased Goods and Services	63
5.4 Online Transactions through Email	64
5.5 Benefits of Using Online Selling or Buying of Goods and Services	65
5.6 Limitations of Online Selling and Buying	66
6 CYBER SECURITY	68
6.1 Enterprises with an ICT Security Policy.....	68
6.2 Awareness of the Malawi Computer Emergency Response Team (Mw- Cert)	70
6.2.1 Awareness of the Existence and Functions of Mw - Cert	70
6.3 Type of IT Security Measures in Place	72
6.4 Enterprises that Lost Data through Virus Attack and Measures used to Retrieve the Lost Data	72
6.4.1 Virus Attack and Loss of Data	72
6.4.2 Enterprises' Means of Retrieving Lost Data	74
6.5 Enterprises that Experienced Online Crime	75
6.5.1 Type of Online Crime	75
6.5.2 Institutions where Enterprises Reported Online Crimes	76
6.5.4 Enterprises that reported Online Crime to Enterprise's Own Employees or External Service Provider	77
7: POSTAL SERVICES	78
7.1 Ownership of Post Office Box	78

7.1.1 Enterprises that Used Any Post Service	78
7.1.2 Type of Postal Services used	79
7.2 Enterprises that received orders via post mail	80
7.2.1 Proportion of Orders Received via Post Mail to Total Orders	81
7.2.2 Enterprises that placed orders via post mail	81
7.2.3 Proportion of Orders Placed via Post Mail to Total Orders	82
7.2.4 Challenges Faced When Using Postal Services	83
7.3 Use of Courier Services	83
7.3.1 Courier Operators Used	84
7.3.2 Challenges Faced When Using Courier Services	85
8: ICT MANAGEMENT AND EXPENDITURES	87
8.1 National ICT Policy	87
8.1.1 National ICT Policy Awareness	87
8.1.2 Adherence to National ICT Policy	88
8.1.3 Reasons for Not Adhering to National ICT Policy	89
8.2 Internal Information, Communications Technologies (ICT) Policy	90
8.3 Use of Computer Operating Systems	91
8.4 Source of ICT Functions Performed	92
8.5 Reasons for using External Suppliers to Perform ICT Functions	93
8.6 Big Data	94
8.7 Electronic Waste Disposal	95
8.7.1 Awareness on Electronic Waste Disposal	95
8.7.2 Disposal of e-Waste by Economic Activity	96
8.7.3 E-Waste Management Policy	97
8.7.4 Disposal of Unwanted or Obsolete ICT Equipment	99
8.8 ICT Expenditures by Service and Equipment	100
8.8.1 ICT Expenditure by Category of Expenditure and Size of Enterprises	100
8.8.2 ICT Expenditure by Economic Activity	101
8.8.3 ICT Expenditure by Type of Expenditure	102
Appendix 1: Selected Summary Tables	108
Appendix 2: ENTERPRISES ICT QUESTIONNAIRE	141

LIST OF TABLES

Table 2.1 Number of Sampled Enterprises by Broad Economic Activity, Malawi 2019	105
Table A2.1 Proportion of Enterprises with a Dedicated Mobile Telephone for Official use by Size and Economic Activity, Malawi 2019	108
Table A2.2 Proportion of Enterprises that Received Orders via Mobile Telephone by Size and Economic Activity, Malawi 2019.....	108
Table A2.3 Proportion of Enterprises that Placed Orders via Mobile Telephone by Size and Economic Activity, Malawi 2019.....	109
Table A2.4 Proportion of Enterprises that Had Bill Payment Account by Size and Economic Activity, Malawi 2019	109
Table A2.5 Proportion of Enterprises that had Till/Merchant Number Code by Size and Economic Activity, Malawi 2019	110
Table A2.6 Proportion of Enterprises that Had Mobile Money Platforms by Size and Economic Activity, Malawi 2019	110
Table A2.7 Proportion of Enterprises with Mobile Money Account by Size and Economic Activity, Malawi 2019	111
Table A2.8 Proportion of Enterprises that used Mobile Banking Platforms by Size and Economic Activity, Malawi 2019	111
Table A2.9 Proportion of Enterprises with a Dedicated Fixed / Landline by Size and Economic Activity, Malawi 2019	112
Table A2.10 Proportion of Enterprises that Received orders via Dedicated fixed / landline by Economic Activity, Malawi 2019.....	112
Table A2.11 Proportion of Enterprises that Placed order via Dedicated Fixed / Landline by Size and Economic Activity, Malawi 2019.....	113
Table A2.12 Proportion of Enterprises with Dedicated Fax Number by Size and Economic Activity, Malawi 2019	113
Table A2.13 Proportion of Enterprises that Received Orders via Dedicated Fax number by Size and Economic Activity, Malawi 2019	114
Table A2.14 Proportion of Enterprises that Placed Orders via Dedicated Fax number by Size and Economic Activity, Malawi 2019	114
Table A2.15 Proportion of Employees that Used a Computer Routinely by Gender and Economic Activity, Malawi 2019.....	115
Table A2.16 Proportion of Enterprises with Internet Connectivity by Size of Enterprise and Economic Activity, Malawi 2019.....	115
Table A2.17 Proportion of Enterprises that Accessed Internet at Other Places by Size of Enterprise and Economic Activity, Malawi 2019.....	116
Table A2.18 Proportion of Enterprises that Used Internet Banking by Size and Economic Activity, Malawi 2019	116
Table A2.19 Proportion of Enterprises with a Local Area Network (LAN) by size of Enterprises and by Economic Activity, Malawi 2019	117
Table A2.20 Percentage of Usage of Internet by Type of Internet Activity and Economic Activity Malawi 2019	118
Table A2.20 Percentage of Usage of Internet by Type of Internet Activity and Economic Activity Malawi 2019	119
Table A2.21 Proportion of Male Employees that used Internet by Economic Activity, Malawi 2019	120
Table A2.22 Proportion of Female Employees that used Internet by Economic Activity, Malawi 2019	121
Table A2.23 Proportion of Enterprises that had Intranet by Size of Enterprises and Economic Activity, Malawi 2019	122
Table A2.24 Proportion of Enterprises that used Specialised Applications for Human Resource Services by Size and Economic Activity 2019	122
Table A2.25 Proportion of Enterprises that Used Extranet by Size of Enterprises and Economic Activity 2019	123
Table A2.26 Percentage Usage of Systems for Placing/ Receiving Orders by Type of System and Economic Activity, Malawi 2019.....	123
Table A2.27 Proportion of Enterprises that had an Active Website by Size of Enterprises and Economic Activity, Malawi 2019.....	124
Table A2.28 Proportion Enterprises by Website Feature and Size, Malawi 2019	124
Table A2.29 Proportion of Enterprises that had Business Web domain by Type of Domain and Economic Activity, Malawi 2019.....	125
Table A2.30 Proportion of Enterprises that had a Business E-mail Address by Size and Economic Activity, Malawi 2019	125
Table A2.31 Proportion of Enterprises that Used Cloud Computing by Size and Economic Activity 2019 Malawi 2019	126
Table A2.32 Proportion of Enterprises' Reasons for Not Using Cloud Computing Service by Economic Activity, Malawi 2019.....	127
Table A2.33 Proportion of Enterprises that were Aware of Electronic Transaction Act by Size of Enterprise and Economic Activity, Malawi 2019	128
Table A2.34 Proportion of Enterprises that Placed Orders for Goods and Services online by Size of Enterprise and Economic Activity, Malawi 2019	128
Table A2.35 Proportion of Enterprises that Placed Orders for Goods and Services Online by Size of Enterprise and Economic Activity, Malawi 2019	129
Table A2.36 Proportion of Enterprises that Received Order for Goods and Services Online by Size of Enterprise and Economic Activity, Malawi 2019	129
Table A2.37 Proportion of Enterprises' Factors that Limited Enterprises from Selling over Internet by Size of Enterprises, Malawi 2019	130
Table A2.38 Proportion of Enterprises with an ICT Security Policy, Malawi 2019	130
Table A2.39 Proportion of Enterprises that were Aware of Existence of Mw -CERT by Size of Enterprise and Economic Activity, Malawi 2019	131
Table A2.40 Proportion of Enterprises that were Aware of the Functions of Mw-CERT by Size of Enterprises and Economic Activity, Malawi 2019	131
Table A2.41 Percentage of Up to date IT Security Measures Used by Size of Enterprises Malawi, 2019	132
Table A2.42 Proportion of Enterprises that Experienced an Attack by a Virus by Size of Enterprises and Economic Activity, Malawi 2019	132

Table A2.43 Proportion of Enterprises with a Post Office Box by Size of Enterprises and Economic Activity, Malawi 2019.....	133
Table A2.44 Proportion of Enterprise that Used any Postal Service by Size of Enterprises and Economic Activity, Malawi 2019	133
Table A2.45 Proportion of Enterprises that Received Orders via Post Mail by Size of Enterprise and Economic Activity, Malawi 2019	134
Table A2.46 Proportion of Enterprises that Pressed Orders via Post Mail by Size of Enterprise and Economic Activity, Malawi 2019	134
Table A2.47 Proportion of Enterprises that Used Courier Service by Size of Enterprise and Economic Activity, Malawi 2019.....	135
Table A2.48 Proportion of Enterprises that Used Courier Service by Operator and Size of Enterprise, Malawi 2019	135
Table A2.49 Proportion of Enterprises that Spent on ICT by Economic Activity and by Expenditure Category, Malawi 2019	136
Table A2.50 Proportion of Enterprises that were Aware of National ICT Policy by Size of Enterprises and Economic Activity, Malawi 2019	136
Table A2.51 Proportion of Enterprises that Adhered to National ICT Policy by Economic Activity, Malawi 2019.....	137
Table A2.52 Proportion of Enterprises an Internal ICT Policy by Size of Enterprises and Economic Activity, Malawi 2019	137
Table A2.53 Proportion of Enterprises ICT Functions by Size of Enterprise and Source, Malawi 2019	138
Table A2.54 Proportion of Enterprises that were Aware of how E-Waste should be Disposed of by Size and Economic Activity, Malawi 2019	139
Table A2.55 Proportion of Enterprises that had an e-Waste Management Policy by Economic Activity and by Size of Enterprise, Malawi 2019	139
Table A2.56 Proportion of Enterprises that disposed Unwanted or obsolete ICT Equipment by Type of equipment, Mode of Disposal and by Size of Enterprise, Malawi 2019	140

LIST OF FIGURES

Figure 2.1: Proportion of Enterprises with a Dedicated Mobile Telephone by Size of Enterprise, Malawi 2019.....	2
Figure 2.2: Proportion of Enterprises with a Dedicated Mobile Telephone by Economic Activity, Malawi 2019.....	3
Figure 2.3: Proportion of Enterprises with Using the Mobile Telephone in Receiving Orders by Size of Enterprise, Malawi 2019	3
Figure 2.4: Proportion of Enterprises Using the Mobile Telephone in Receiving Orders by Economic Activity, Malawi 2019	4
Figure 2.5: Proportion of Enterprises Using the Mobile Telephone in Placing Orders by Size of Enterprises, Malawi 2019	5
Figure 2.6: Proportion of Enterprises Using the Mobile Phone in Placing Orders by Economic Activity, Malawi 2019.....	5
Figure 2.7: Proportion of Orders Received and Placed Using Mobile Telephones, Malawi 2019	6
Figure 2.8: Proportion of Enterprises Using the Mobile Money Platforms by Size of Enterprise Malawi 2019.....	7
Figure 2.9: Proportion of Enterprises Using Mobile Money Platforms by Economic Activity, Malawi 2019	7
Figure 2.10: Proportion of Enterprises with Bill Payment Account by Size of Enterprises, Malawi 2019	8
Figure 2.11: Proportion of Enterprises with Bill Payment Account by Economic Activity, Malawi 2019	9
Figure 2.12: Proportion of Enterprises with Till/Merchant Account by Size of Enterprises Malawi 2019	10
Figure 2.13: Proportion of Enterprises with Till/Merchant Account by Economic Activity Malawi 2019.....	11
Figure 2.14: Proportion of Enterprises with Mobile Money Account by Size of Enterprises Malawi 2019.....	12
Figure 2.15: Proportion of Enterprises with Mobile Money Account by Economic Activity, Malawi 2019.....	13
Figure 2.16: Proportion of Payments Received Using Mobile Payments and Mobile Money Accounts by Size of Enterprises, Malawi 2019	14
Figure 2.17: Challenges Encountered by Enterprises with Mobile Payment and Mobile Money Accounts- 2019.....	14
Figure 2.18: Proportion of Enterprises Using Mobile Banking Platforms by Size of Enterprises-2019.....	15
Figure 2.19: Proportion of Enterprises Using Mobile Banking Platforms by Economic Activity- 2019	15
Figure 2.20: Challenges Encountered when Using Mobile Banking- Malawi 2019	16
Figure 2.21: Proportion of Enterprises with a Dedicated Fixed Telephone by Size of Enterprises - 2019	17
Figure 2.22: Proportion of Enterprises with a Dedicated Fixed Telephone by Economic Activity- 2019	18
Figure 2.23: Proportion of Enterprises that Received Orders Using Fixed Telephone by Size of Enterprise, Malawi 2019	18
Figure 2.24: Proportion of Enterprises that Received Orders Using Fixed Telephones by Economic Activity, Malawi 2019	19
Figure 2.25: Proportion of Enterprises that Placed Orders using Fixed Telephone by Size of Enterprises, Malawi 2019	20
Figure 2.26: Proportion of Enterprises that Placed Orders Using Fixed Telephones by Economic Activity, Malawi 2019	20
Figure 2.27: Proportion of Orders Received and Placed using Fixed Telephones- 2019	21
Figure 2.28: Proportion of Order Received Using Fixed Telephone by Economic Activity, Malawi 2019	22
Figure 2.29: Challenges Encountered when Receiving and Placing Orders via Fixed Telephone, 2019	23
Figure 2.30: Proportion of Enterprises Using Facsimile by Size of Enterprises, Malawi 2019	23
Figure 2.31: Proportion of Enterprises Receiving Orders using Facsimile by Size of Enterprises Malawi 2019	24
Figure 2.32: Proportion of Enterprises Placing Orders using Facsimile by Size of Enterprises Malawi 2019	24
Figure 2.34: Proportion of Orders Received and Placed using Facsimile, Malawi 2019	25
Figure 3.1: Proportion of Enterprises that used Computers by Size of the Enterprise, Malawi 2019	26
Figure 3.2: Proportion of Enterprises that used Computers by Economic Activity, Malawi 2019	27
Figure 3.3: Proportion of Employees that Used a Computer by Gender and Size of the Enterprise, Malawi 2019	28
Figure 3.4: Proportion of Employees that Used a Computer by Economic Activity, Malawi 2019	29
Figure 3.5: Proportion of Employees Provided with ICT Equipment by Gender and Type of Equipment, Malawi 2019	30
Figure 4.1: Proportion of Enterprises with Internet Connectivity by Size of the Enterprise Malawi 2019	31
Figure 4.2: Proportion of Enterprises with Internet Connectivity by Economic Activity, Malawi 2019	32
Figure 4.3: Proportion of Enterprises with Access to Internet for Official Purposes by Size of Enterprises, Malawi 2019	33
Figure 4.4: Proportion of Enterprises with Access to Internet for Official Purpose by Economic Activity, Malawi	34
Figure 4.5: Proportion of Employees that Used Internet for Business Purpose by Gender Malawi 2019	35
Figure 4.6: Proportion of Enterprise Using Local Area Networks by Size of Enterprises Malawi 2019.....	35
Figure 4.7: Proportion of Activities Performed by Enterprises Using the Internet by Type of Internet Activity, Malawi 2019	36
Figure 4.8: Proportion of E-Government Services Most Used by Enterprises by Size of Enterprise 2019.....	37

Figure 4.9: Proportion of Enterprises that Used Internet Banking Services by Size of Enterprises Malawi 2019.....	38
Figure 4.10: Proportion of Enterprise that Used Internet Banking Services by Economic Activity, Malawi 2019	38
Figure 4.11: Proportion of Enterprises that Faced Challenges with Internet Banking by Type of Challenge and by Size of Enterprise, Malawi 2019	39
Figure 4.12: Proportion of Enterprises that Used Intranet by Size of the Enterprises, Malawi 2019	40
Figure 4.13: Proportion of Enterprise that Used Intranet to Share Information by Type of Information and by Size of Enterprises, Malawi 2019	41
Figure 4.14: Proportion of Enterprise that Used Specialized Application by Size of Enterprise, Malawi 2019.....	41
Figure 4.15: Proportion of Enterprises that used Specialized Applications by Economic Activity, Malawi 2019	42
Figure 4.16: Proportion of Enterprises that used Extranet by Size of Enterprises, Malawi 2019	43
Figure 4.17: Proportion of Enterprises that Used Extranet to Place / Receive orders by Type of Extranet Service and by Size of Enterprises, Malawi 2019	43
Figure 4.18: Proportion of Enterprises that Used Computer Systems to Place Orders by Type of Connection and Size of Enterprise, Malawi 2019	44
Figure 4.19: Proportion of Enterprises' Use of Computer Systems to Receive Orders by Type Connection and Size of Enterprises, Malawi 2019	45
Figure 4.20: Proportion of Enterprises with an Active Website by Size of Enterprise, Malawi 2019	46
Figure 4.21: Proportion of Enterprises' Use of Website by Type of Web domain and size of Enterprises, Malawi 2019.....	46
Figure 4.22: Proportion of Enterprises With an Active Website by Location for Hosting the Website and Size of Enterprise, Malawi 2019	47
Figure 4.23: Proportion of Enterprises that Hosted their Websites Internationally by Reason and Size of Enterprise 2019	48
Figure 4.24: Proportion of Enterprises that used Website Features by Enterprise Size, Malawi 2019	49
Figure 4.25: Proportion of Enterprises' that had a Business E-mail Address by Size of Enterprises, Malawi 2019.....	50
Figure 4.26: Proportion of Enterprises' that had a Business E-mail Address by Economic Activity, Malawi 2019.....	51
Figure 4.27: Proportion of Enterprises Used Social Networking Websites by Type of Usage Malawi 2019.....	52
Figure 4.28: Proportion of Enterprises that used Cloud Computing by Size of Enterprises Malawi 2019.....	53
Figure 4.29: Proportion of Enterprises using Cloud Computing by Economic Activity, Malawi 2019	54
Figure 4.30: Proportion of Enterprises that used Cloud Computing by Type of Service, Malawi 2019.....	55
Figure 4.31: Proportion of Enterprises Use of Cloud Computing by Type of Benefit, Malawi 2019	56
Figure 4.32: Proportion of Reasons for not Using Cloud Computing, Malawi 2019	56
Figure 4.33: Proportion of Enterprises Future Adoption of Cloud Computing by Size of Enterprises, Malawi 2019.....	57
Figure 4.34: Proportion of Enterprises Using IoT Devices by Size of Enterprises, Malawi 2019	58
Figure 4.35: Percentage of Enterprises that used an Application to manage IoT Devices by Size of Enterprises Malawi 2019.....	58
Figure 4.36: Proportion of Enterprises that used Security Products for IoT Devices by Type of Security Malawi 2019.....	59
Figure 5.1: Proportion of Enterprises awareness of the Electronic Transactions Act by Size of the Enterprise, Malawi 2019	61
Figure 5.2: Proportion of Enterprises' Uptake of e-Commerce Activities by Size of Enterprises Malawi 2019.....	61
Figure 5.3: Proportion of Enterprises Engaged in e-Commerce Activities by Economic Activity Malawi 2019.....	62
Figure 5.4: Proportion of Enterprises for Online Purchases by Size of Enterprises, Malawi 2019	62
Figure 5.5: Proportion of Enterprises for Online Purchases by Economic Activity, Malawi 2019	63
Figure 5.6: Proportion of Enterprises Engaged in Online Purchasing, by Size and Mode of Delivery, Malawi 2019.....	64
Figure 5.7: Proportion of Enterprises Engaged in Online Transaction through Email by Size of Enterprises, Malawi 2019	65
Figure 5.8: Proportion of Benefits of using Online Selling or Buying, Malawi 2019	66
Figure 5.9: Proportion of Enterprises with Limitations of Online Selling and Buying, Malawi 2019	67
Figure 6.1: Proportion of Enterprises with ICT Security Policies by Size of the Enterprise Malawi 2019.....	69
Figure 6.2: Proportion of Top 5 Enterprises with the ICT Security Policy by Economic Activity, Malawi 2019.....	70
Figure 6.3: Proportion of Enterprises that were Aware of the Existence and Functions of Mw-Cert by Size of the Enterprises - 2019	71
Figure 6.4: Proportion of Top five Enterprises that were Aware of existence and Functions of Mw-Cert by Economic Activity, Malawi 2019	71
Figure 6.5: Proportion of IT Security Measures used by Enterprises, Malawi 2019	72
Figure 6.6: Proportion of Enterprises that Experienced Virus Attack by Size of the Enterprises Malawi 2019.....	73
Figure 6.7: Proportion of Enterprises that Lost Data Due to Virus Attack by Economic Activity, Malawi 2019.....	74
Figure 6.8: Proportion of Enterprises' Means of Retrieving Lost Data by Size of the Enterprise, Malawi 2019.....	75
Figure 6.9: Proportion of Enterprises that Experienced Online Crime by Type of Crime, Malawi 2019.....	76
Figure 6.10 :Proportion of Institutions where Enterprises Reported Online Crimes, Malawi 2019.....	76
Figure 6.11: Proportion of Enterprises that Also Reported online Crimes to Enterprise Own Employees or External Service Provider, Malawi 2019	77

Figure 7.1: Proportion of Enterprises with a Post Office Box by Size of Enterprises, Malawi 2019.....	78
Figure 7.2: Proportion of Enterprises that Using Postal Services by Size of Enterprises, Malawi 2019	79
Figure 7.3: Proportion of Enterprises that Used Postal Services by Type of Services and by Size of Enterprises, Malawi 2019	80
Figure 7.4: Proportion of Enterprises that Received Orders via Post Mail by Size of Enterprises Malawi 2019	81
Figure 7.5: Proportion of Orders Received via Post Mail to Total Orders by Size of Enterprises Malawi 2019.....	81
Figure 7.6: Proportion of Enterprises that Placed Orders via Post Mail by Size of Enterprises Malawi 2019	82
Figure 7.7: Proportion of Enterprises that Placed Orders via Post Mail to Total Orders by Size Enterprises, Malawi 2019	82
Figure 7.8: Proportion of Enterprises that faced Challenges Faced when Using Postal Services by Type of Challenge and by Size of Enterprises, Malawi 2019	83
Figure 7.9: Proportion of Enterprises Using Courier Services by Size of Enterprises, Malawi 2019.....	84
Figure 7.10: Proportion of Enterprises that Used Courier Operations by Top 5 Operators and by Size of Enterprise, Malawi 2019	85
Figure 7.11: Proportion of Enterprises' that Faced Challenges Using Courier Services by Type of Challenge and Size of Enterprise, Malawi 2019	86
Figure 8.1: Proportion of Enterprises' Awareness of National ICT Policy by Size, Malawi 2019	87
Figure 8.2: Proportion of Enterprises Awareness of National ICT Policy by Economic Activity, Malawi 2019	88
Figure 8.3: Proportion of Enterprises Adhering to National ICT Policy by Size, Malawi 2019.....	89
Figure 8.4: Percent distribution of Reasons for not Adhering to National ICT Policy by size, Malawi 2019	89
Figure 8.5: Proportion of Enterprises with Internal ICT Policies by Size, Malawi 2019.....	90
Figure 8.6: Proportion of Enterprises' with Internal ICT Polices by Economic Activity, Malawi 2019	91
Figure 8.7: Proportion of Enterprises' Computers Installed with an Operating System by Size Malawi 2019.....	92
Figure 8.8: Percentage Distribution of ICT Functions Performed by Enterprises by Source of Function, Malawi 2019	93
Figure 8.9: Percent Distribution of Reasons for Using External Suppliers to Perform Enterprise ICT functions, Malawi 2019	94
Figure 8.10 Proportion of Enterprises by Type of Big Data Analysed during the Reference Period Malawi 2019	95
Figure 8.11: Proportion of Enterprises Awareness of e-Waste Disposal by Size of Enterprises Malawi 2019	96
Figure 8.12: Proportion of Enterprises that knew how to dispose of e-Waste by Economic Activity, Malawi 2019.....	97
Figure 8.13: Proportion of Enterprises with an e-Waste Management Policy, Malawi 2019	98
Figure 8.14 Proportion of Enterprises with an e-Waste Management Policy by Economic Activity, Malawi 2019	99
Figure 8.15 Proportion of Enterprises Disposing Unwanted/Obsolete ICT Equipment by Size Malawi 2019	100
Figure 8.16: Proportion of Enterprise that spent on ICT by Expenditure Category and by Size of Enterprise, Malawi 2019.....	101
Figure 8.17: Proportion of Enterprises that Spent on ICT by Economic Activities, Malawi 2019.....	102
Figure 8.18: Proportion of Enterprises that Spent on ICT by Type of Expenditure, Malawi 2019.....	103

ABBREVIATIONS, ACRONYMS AND SYMBOLS

AES	Annual Economic Survey
BIR	Business Information Register
CEA	Census of Economic Activities
DSL	Digital Subscriber Line
LAN	Local Area Network
MACRA	Malawi Communication and Regulatory Authority
ICT	Information and Communication Technologies
ITU	International Telecommunications Union
WSIS	World Summit on the Information Society
ICT	Information and Communication Technology
ISIC	International Standard Industrial Classification of all Economic Activities
K	Kwacha
MDA	Ministry, Department and Agency
MGDS	Malawi Growth and Development Strategy
na	Not Applicable
n.e.c.	not elsewhere classified
NSO	National Statistical Office
PPPC	Public Private Partnership Commission
*	Less than a fraction of the unit e.g. 0.03 of employees
%	Percent
‘000’	Thousand Kwacha
VoIP	Voice over Internet Protocol

1 INTRODUCTION

1.1 Background

The Government of Malawi underlines the key contribution of Information and Communication Technologies (ICT) as pivotal towards accelerating growth of the other sectors of the economy and how it acts as enabler for poverty reduction and wealth creation for the socio-economic development of the country. This is evidenced by the emphasis Government has placed on the sector in the Malawi Growth and Development Strategy III (MGDS III) which covers the period 2017 to 2022, as a key priority area. One deliberate strategy in the national development strategy is promoting the adoption, transfer and utilization of appropriate technologies to bridge the digital divide and lower the cost of communication in the country. At the same time, Government aims at providing its essential services through the e-Government platform as stipulated under strategy on developing public online services in order to increase access to information and communication services in the country. Further to this, Government continues to implement the National ICT policy, revised the Communications Act in 2016 and recently developed the National Broadband Strategy as well as draft e-Waste Management Strategy with the aim of responding to the rapid developments in the sector and to attract investors.

1.2 Main Objective of the Survey

The main objective of the survey was to collect and analyze data on the accessibility and usage of ICT services in Malawi following the internationally agreed ICT indicators as defined by the International Telecommunications Union (ITU) and the World Summit on Information Society (WSIS).

1.2.1 Specific Objectives of the Survey

The specific objectives of the National Enterprise ICT survey were:

1. To provide and compile baseline indicators on availability of ICT for enterprises in the country
2. To assess and understand how government entities and private enterprises access and use ICT Services.
3. Assess the use of ICT infrastructure and applications in public and private enterprises
4. Assess existence of internal ICT policies in government/public entities and private enterprises in the country.
5. To collect and produce relevant government entities and private enterprises ICT statistics in line with ITU and WSIS indicators for international and regional comparability
6. To determine and understand the challenges, constraints and barriers faced by enterprises in accessing and using ICT services.

To achieve the above objectives, a representative sample size of 1,700 enterprises was drawn to represent all sectors of the economy. Classification of size of enterprises was based on their annual turnover. All businesses with turnover of less than MK50 million were classified as small while those with turnover of MK50 million to less than MK500 million were classified as medium. All businesses with MK500 million turnover and above were considered large enterprises

2 USE OF TELEPHONE BY ENTERPRISES

Telephones play an important role in business as they are used to share information through departments, handle inquiries from customers and clients, book appointments for essential services and hold conference calls.

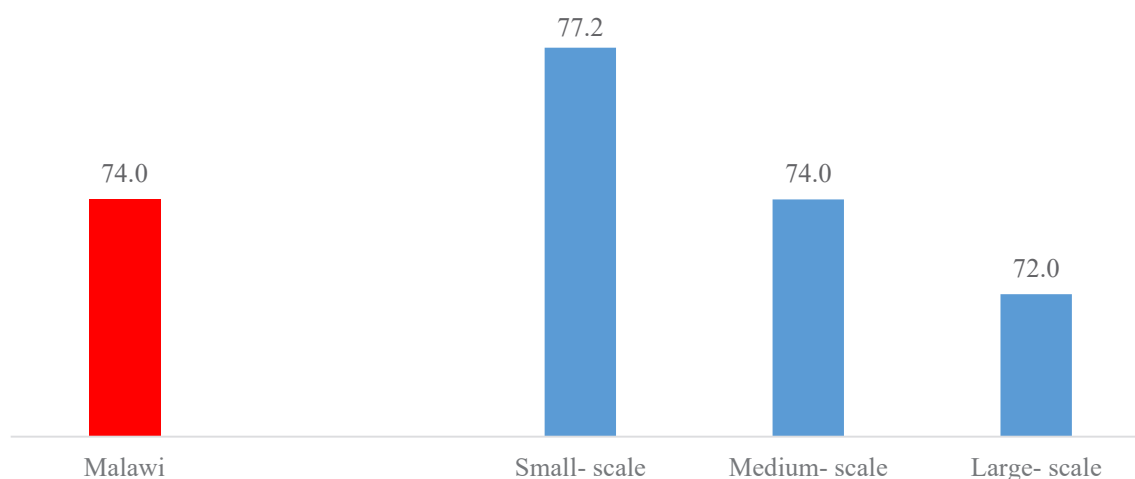
2.1 Use of Mobile Telephones

A **Mobile telephone** is a portable telephone that can make and receive calls over a radio frequency link while the user is moving within a telephone service area.

2.1.1 Enterprises with Mobile Telephones

Overall, 74.0 percent of enterprises had a dedicated mobile telephone for business purposes. The largest segment with a dedicated mobile telephone were the small scale enterprises at 77.2 percent, followed by medium scale enterprises at 74.0 percent and large scale enterprises at 72.0 percent (Figure 2.1).

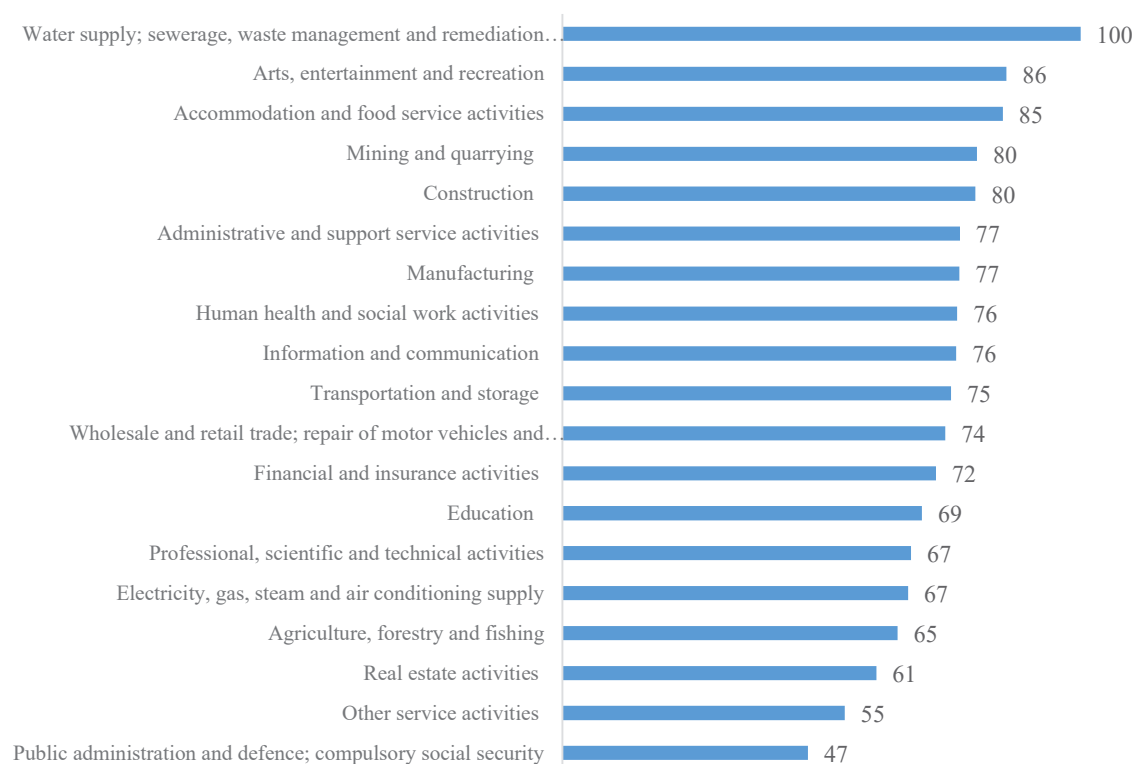
Figure 2.1: Proportion of Enterprises with a Dedicated Mobile Telephone by Size of Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that Water supply, sewerage, waste management and remediation activities had the highest proportion of enterprises with a dedicated mobile telephone for business at 100 percent, followed by Arts, entertainment and recreation at 85.7 percent. Public Administration, defense and compulsory social security services had the lowest proportion at 47.4 percent (Figure 2.2).

Figure 2.2: Proportion of Enterprises with a Dedicated Mobile Telephone by Economic Activity, Malawi 2019

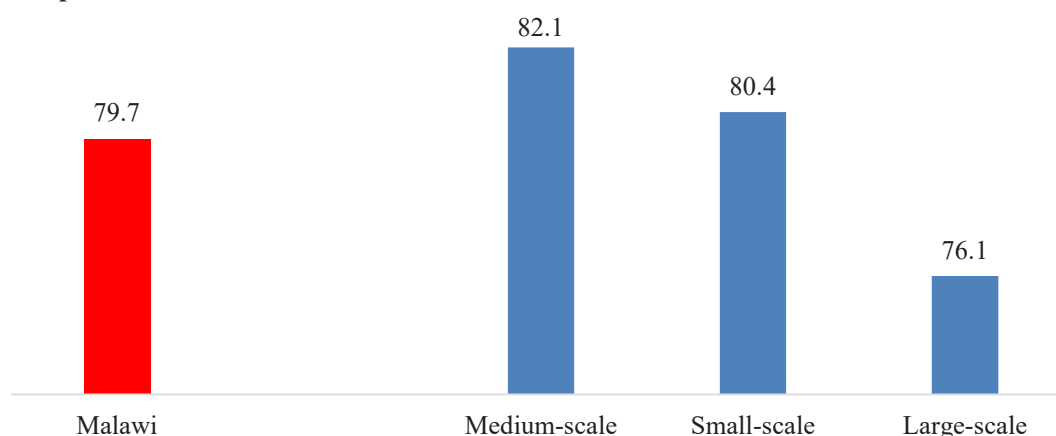


Source: National Enterprise ICT Survey, 2019

2.1.2 Use of Mobile Telephones in Receiving Orders

Overall, 79.7 percent of the enterprises received orders using mobile telephones. The highest proportion of enterprises that received orders using mobile telephones was in the medium scale enterprise category at 82.1 percent followed by small scale enterprise category at 80.1 percent and large scale enterprise category at 76.1 percent (Figure 2.3).

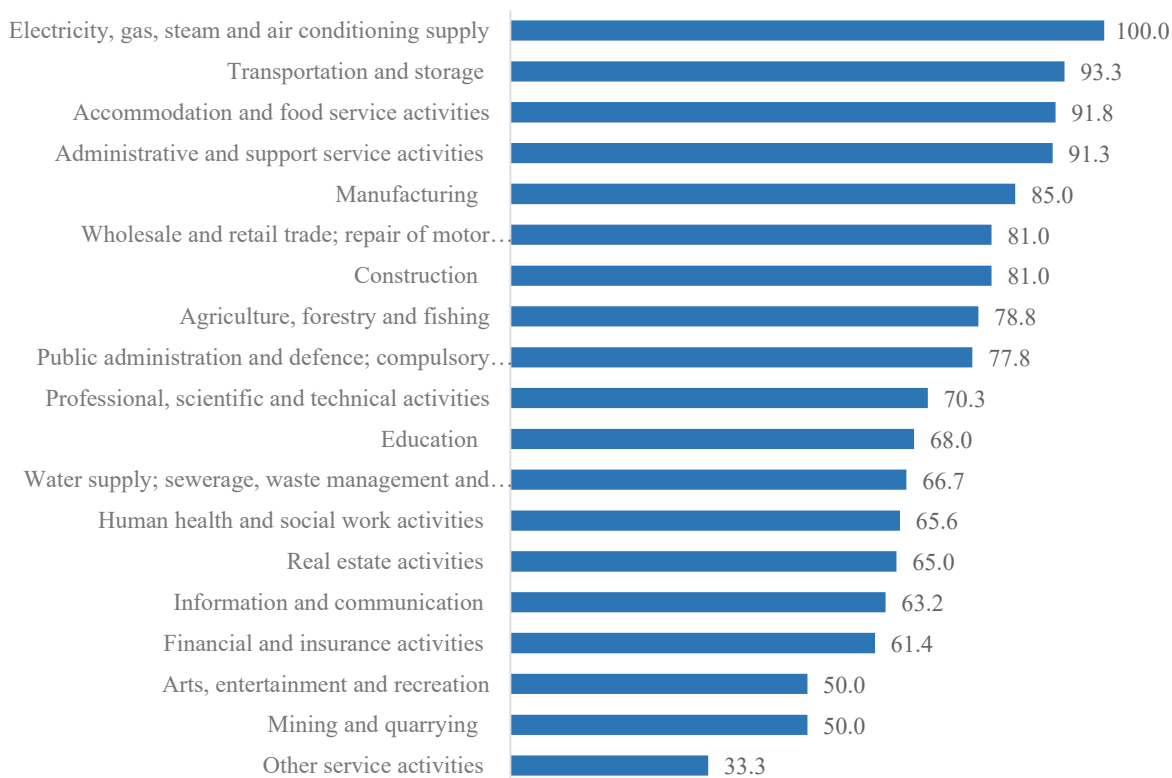
Figure 2.3: Proportion of Enterprises Using the Mobile Telephone in Receiving Orders by Size of Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

The use of mobile telephones for receiving orders was highest in the Electricity, gas, steam and air conditioning supply sector at 100 percent followed by Transport and storage at 93.3 percent. The proportion of enterprises using the mobile telephones in receiving orders was lowest in the other services sections at 33.3 percent (Figure 2.4).

Figure 2.4: Proportion of Enterprises Using the Mobile Telephone in Receiving Orders by Economic Activity, Malawi 2019

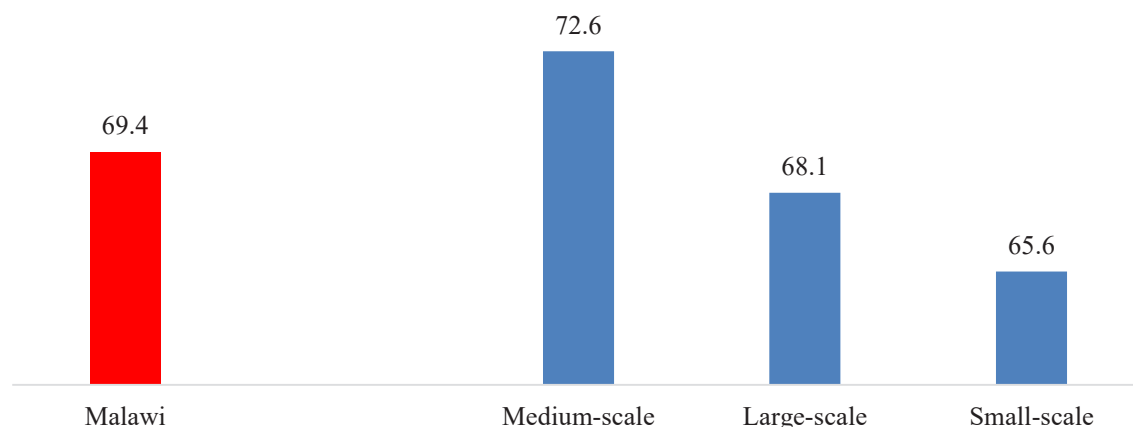


Source: National Enterprise ICT Survey, 2019

2.1.3 Use of Mobile Telephones in Placing Orders

Overall, the proportion of enterprises that placed orders via mobile telephones was 69.4 percent. The use of mobile telephones for placing orders was common in medium and large size enterprises with 72.6 percent and 68.1 percent respectively. About 66 percent of the small size enterprises reported to have made orders using the mobile telephone (Figure 2.5).

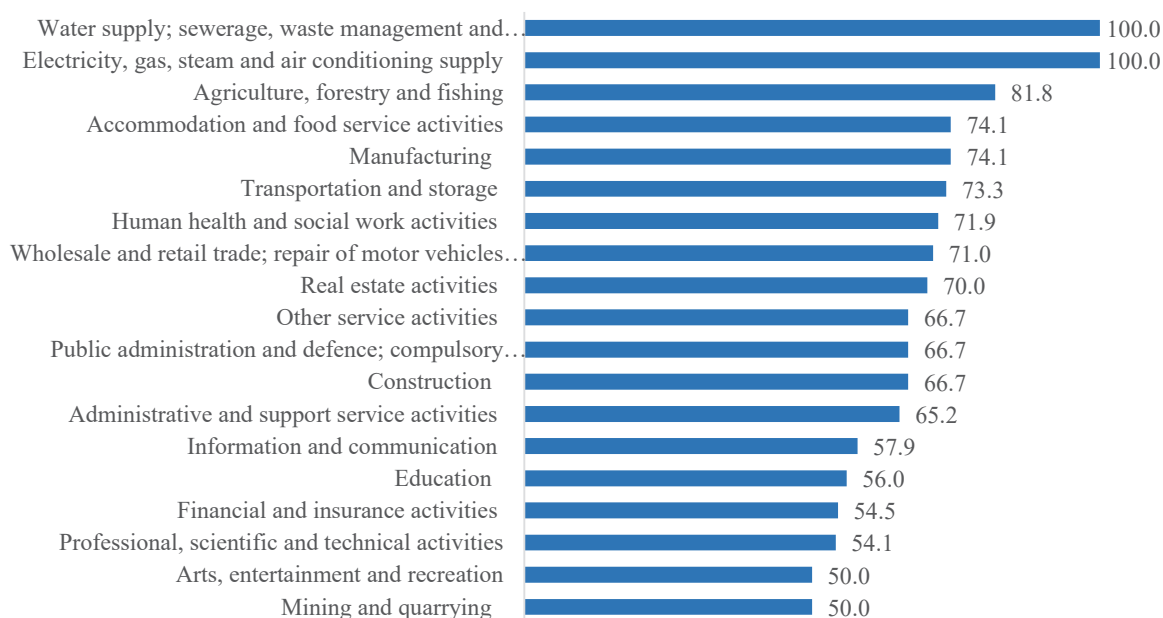
Figure 2.5: Proportion of Enterprises Using the Mobile Telephone in Placing Orders by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

The results show that two sections namely, Electricity, steam, gas and air conditioning supply and Water supply, sewerage, waste management and remediation activities registered the highest proportion of orders placed using mobile telephones at 100 percent followed by Agriculture, forestry and fishing section at 81.8 percent. The sections which registered the lower proportions of orders placed via mobile telephones were Mining and quarrying and Arts, entertainment and recreation sections, both at 50.0 percent (Figure 2.6).

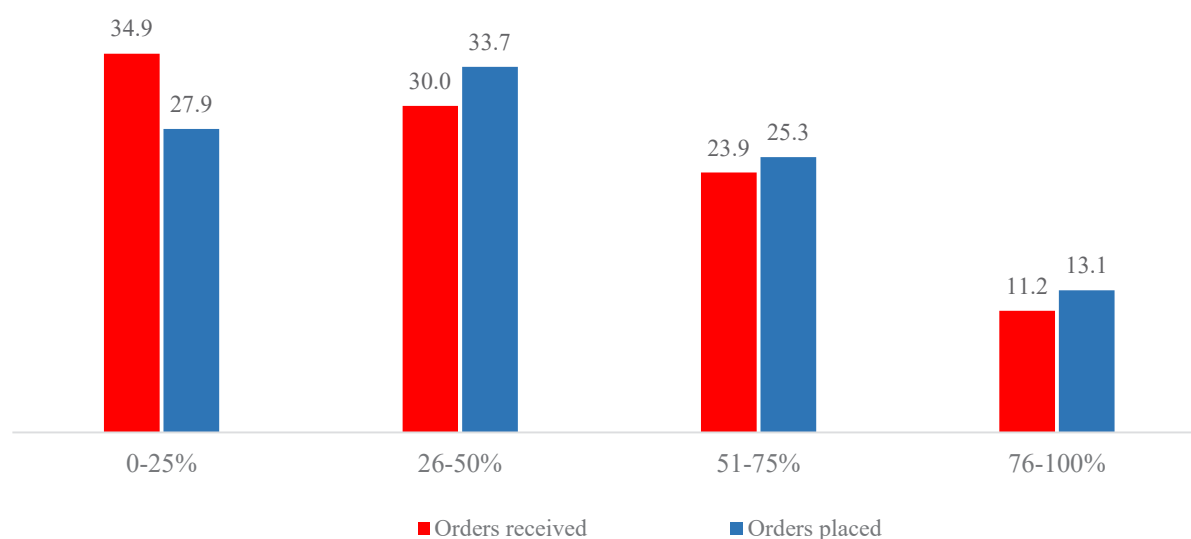
Figure 2.6: Proportion of Enterprises Using the Mobile Phone in Placing Orders by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

The highest proportion of orders received using the mobile telephone was between 0-25 percent at 34.9 percent while the highest proportion of orders that were placed was between 26-50 percent at 33.7 percent (Figure 2.7).

Figure 2.7 Proportion of Orders Received and Placed Using Mobile Telephones, Malawi 2019



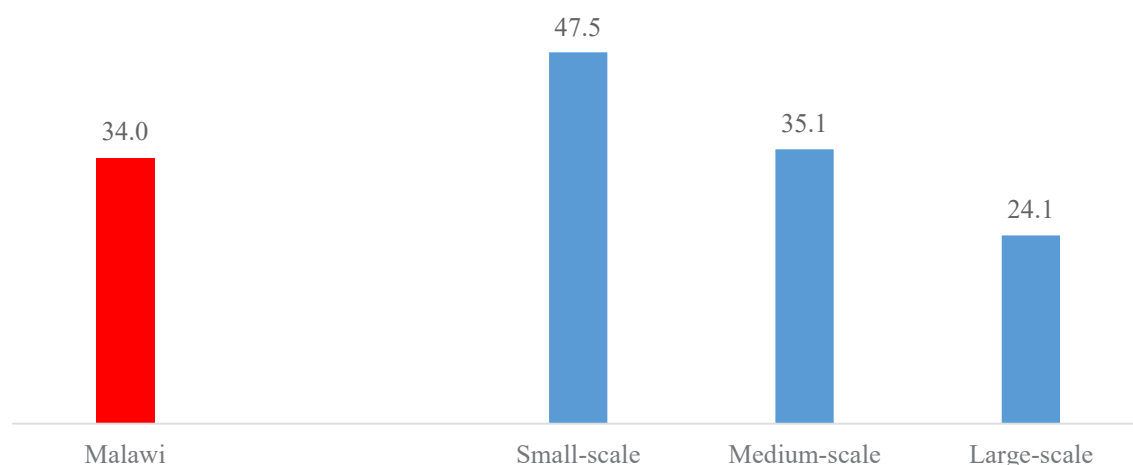
Source: National Enterprise ICT Survey, 2019

2.1.4 Use of Mobile Money Platforms

Mobile money platforms allow users to transfer funds between banks or accounts, deposit or withdraw funds or pay bills using a mobile telephone. Mobile money platforms include Airtel money and TNM Mpamba.

About 34 percent of the enterprises used mobile money platforms in Malawi in 2019. Small scale enterprises had the highest proportion of enterprises using mobile money platforms at 47.5 percent followed by medium and large scale enterprises at 35.1 percent and 24.1 percent, respectively (Figure 2.8).

Figure 2.8: Proportion of Enterprises Using Mobile Money Platforms by Size of Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activities shows that Transport and storage section had the highest proportion of enterprises that used mobile money platforms at 51.7 percent followed by construction at 49.4 percent. Electricity, gas, steam and air conditioning supply section recorded almost 0.0 percent of the enterprises that had used any mobile money platform (Figure 2.9).

Figure 2.9: Proportion of Enterprises Using Mobile Money Platforms by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

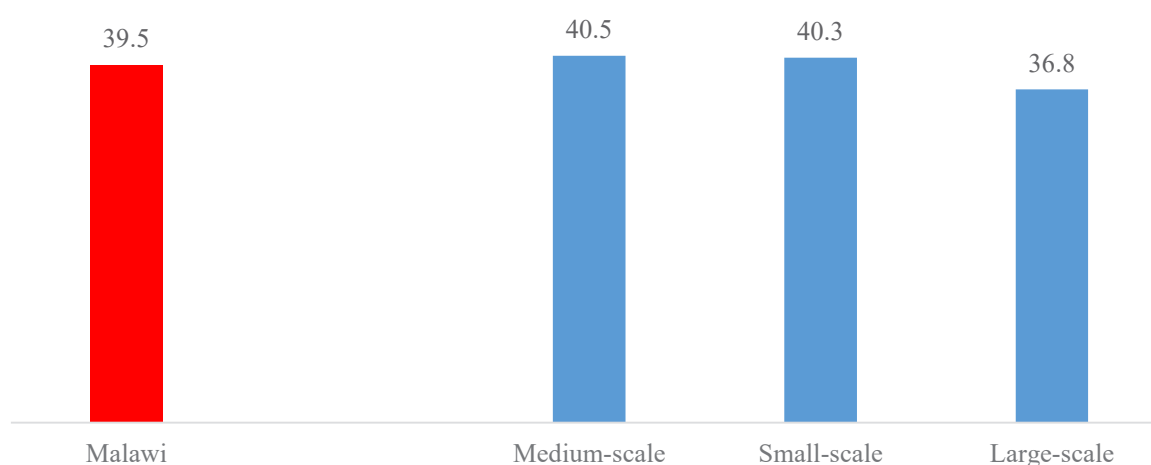
2.1.5 Enterprises with Mobile Payment Accounts

Mobile payment accounts are used in receiving payments either at point of sale or at institutional level and unlike mobile money platform they are not used to transfer money from one account to another. The commonly used mobile payment accounts by businesses include bill payment account or number where customers pay on their mobile money platform, merchant numbers which are used for immediate purchase of goods and services from the till.

2.1.5.1 Enterprises with Bill Payment Account

Overall, 39.5 percent of the enterprises had a bill payment account. About 40 percent each of medium and small scale enterprises and 36.8 percent of the large scale enterprises had bill payment account (Figure 2.10).

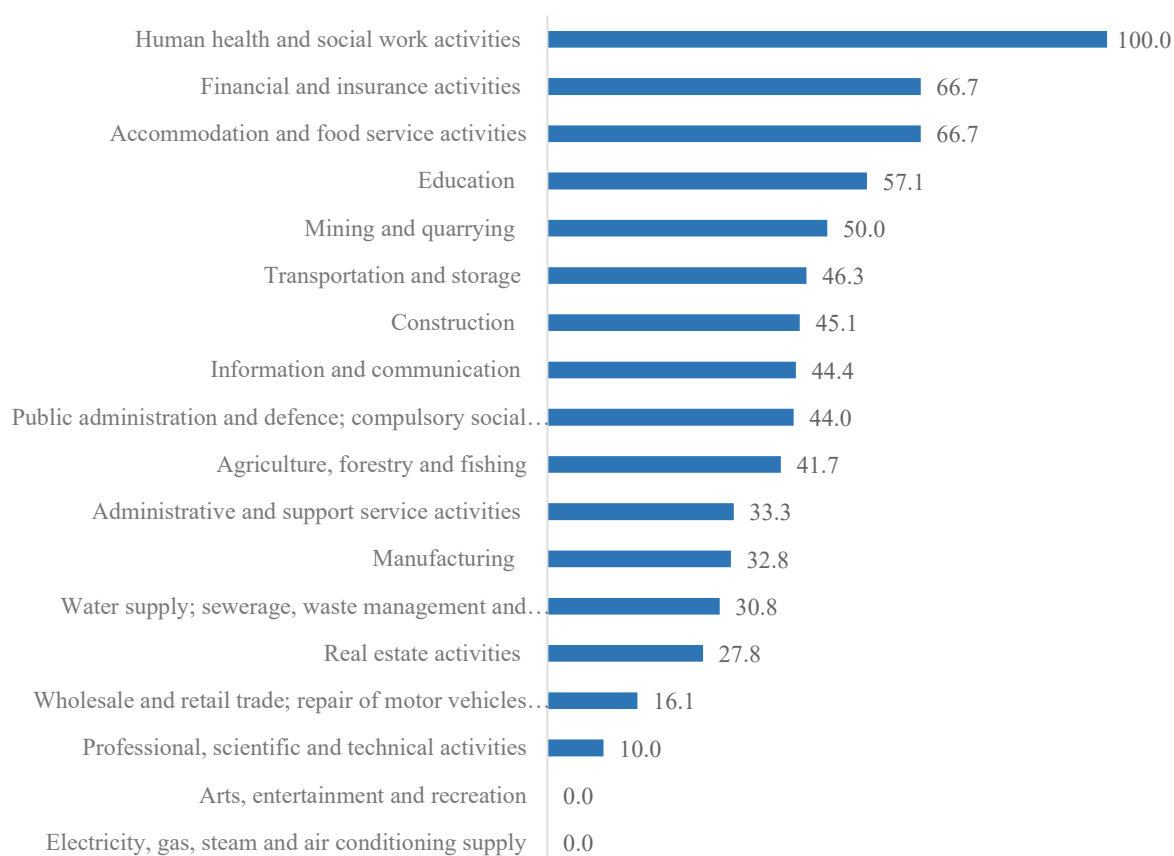
Figure 2.10: Proportion of Enterprises with Bill Payment Account by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that all enterprises (100 percent) in the human health and social work activities had a bill payment account, followed by those in finance and insurance activities and accommodation and food services activities each at 66.7 percent. Arts, entertainment and recreation and electricity, gas, steam and air condition supply sections recorded almost 0.0 percent of the enterprise owning a bill payment account (Figure 2.11).

Figure 2.11: Proportion of Enterprises with Bill Payment Account by Economic Activity, Malawi 2019

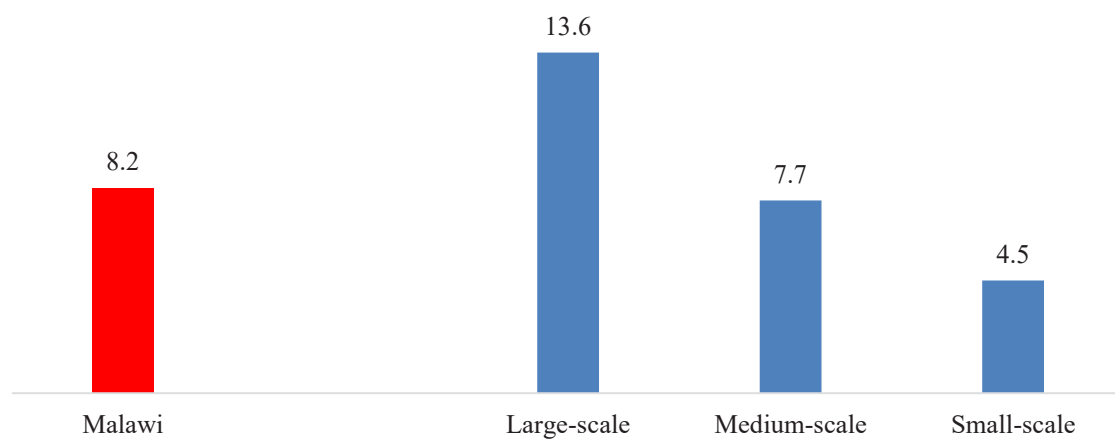


Source: National Enterprise ICT Survey, 2019

2.1.5.2 Enterprises with Till/ Merchant Account

Enterprises that reported to have a till/merchant account were 8.2 percent in total. Large scale enterprises had the highest proportion of enterprises with till/ merchant account at 13.6 percent followed by medium scale enterprises at 7.7 percent. Small scale enterprises had the lowest proportion of the enterprises with till/ merchant account at 4.5 percent (Figure 2.12).

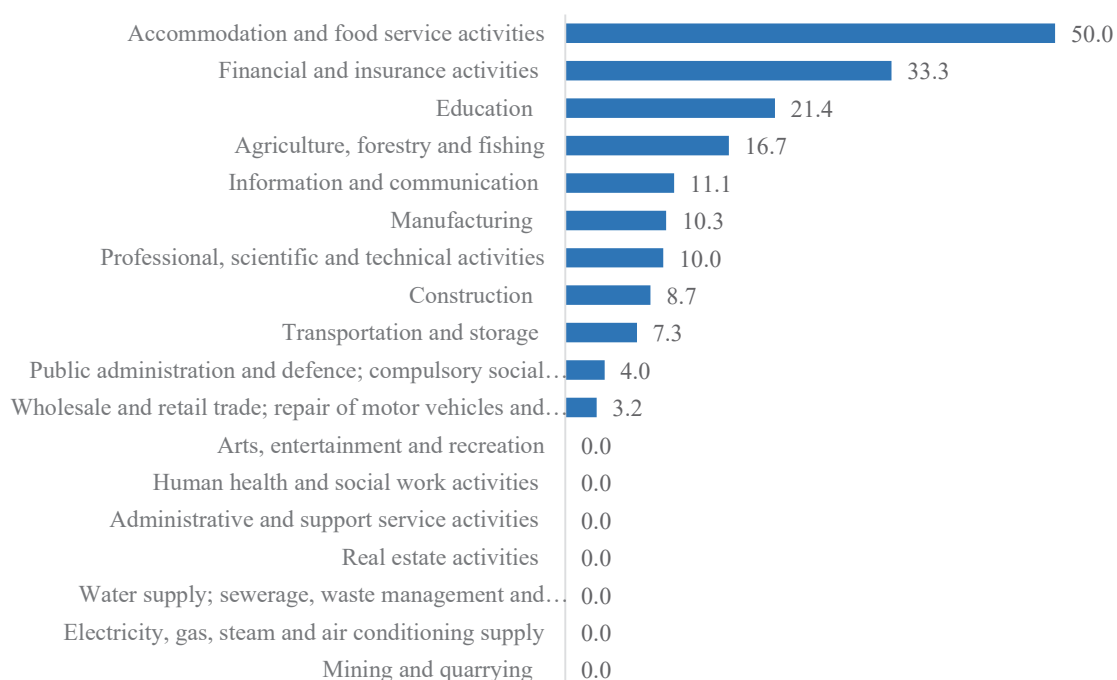
Figure 2.12: Proportion of Enterprises with Till/Merchant Account by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that Accommodation and food services section had the highest proportion of enterprises with till/ merchant account at 50.0 percent. Mining and quarrying, Water supply, sewerage, waste management and remediation activities, Construction, Professional, scientific and technical services, Public administration and defense, compulsory and social security, Arts, recreation and entertainment sections recorded almost 0.0 percent of enterprises with till/ merchant account (Figure 2.13).

Figure 2.13: Proportion of Enterprises with Till/Merchant Account by Economic Activity, Malawi 2019



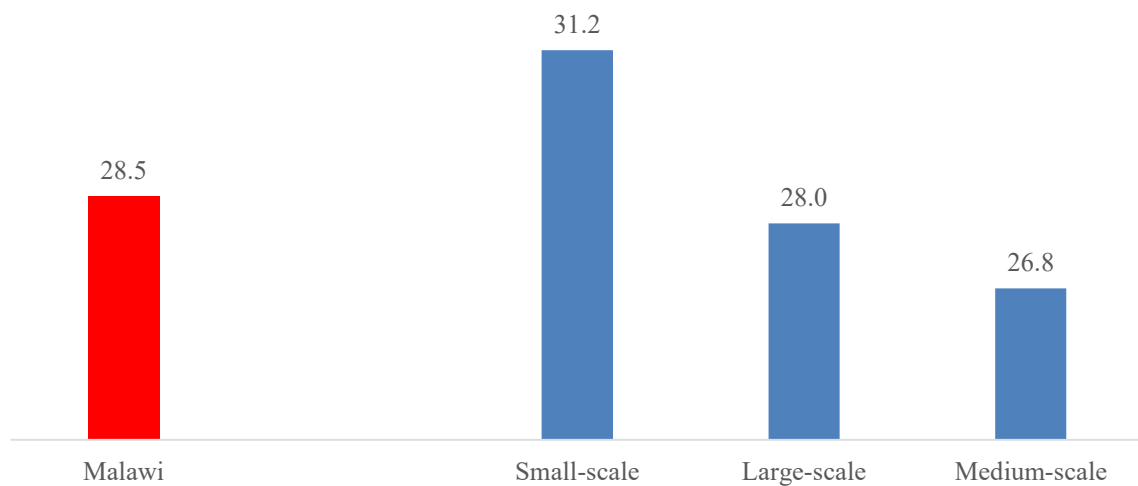
Source: National Enterprise ICT Survey, 2019

2.1.6. Enterprises with Mobile Money Account

A mobile money account such as airtel money and TNM Mpamba is an account which an enterprise uses for sending and receiving money, paying bills and other financial transactions using a mobile telephone.

Overall, 28.5 percent of the enterprises had a mobile money account. The highest proportion of enterprises with a mobile money account were small scale enterprises at 31.2 percent followed by large scale enterprises at 28.0 percent while medium scale enterprises had the least with 26.8 percent (Figure 2.14).

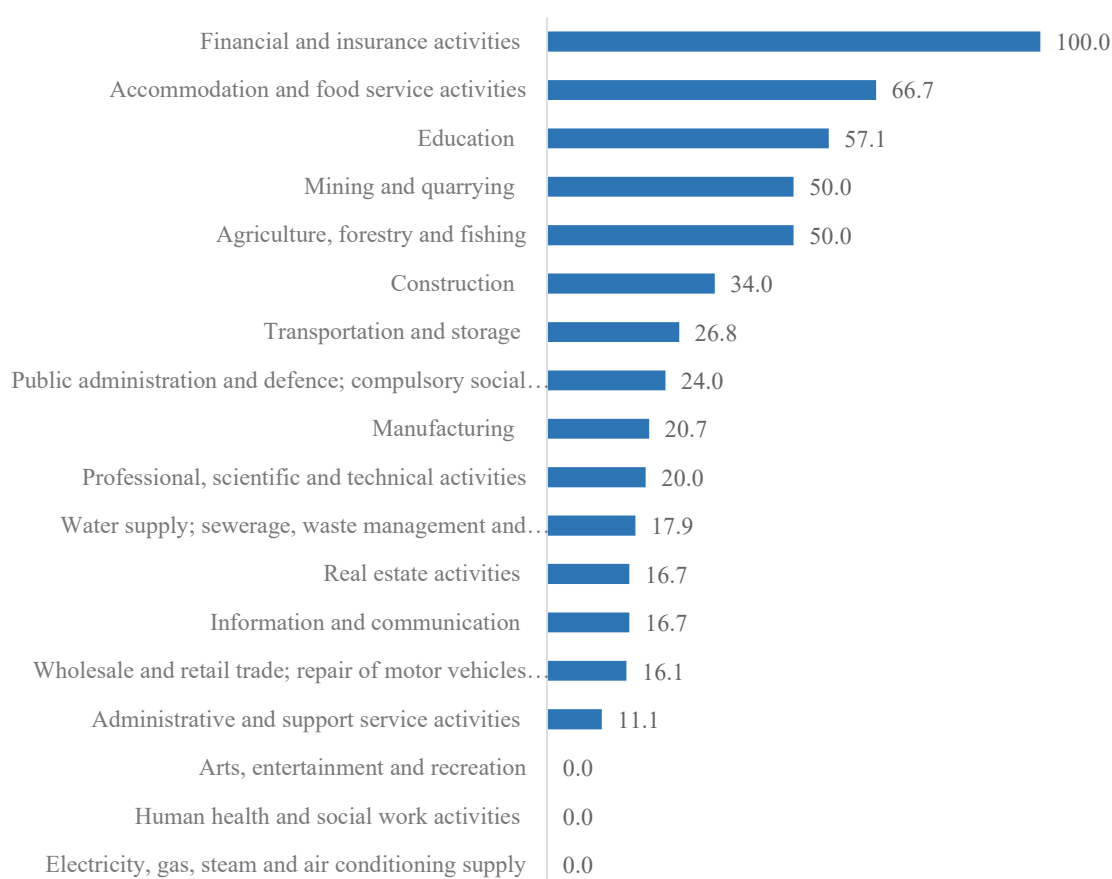
Figure 2.14: Proportion of Enterprises with Mobile Money Account by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by sector shows that Financial and insurance section registered the highest proportion (100 percent) of enterprises with mobile money accounts followed by Accommodation and food services at 66.7 percent and Education at 55.1 percent. Arts, entertainment and recreation; Electricity, gas, steam and air conditioning supply; and Human health and social work activities recorded almost 0.0 percent of enterprises with mobile money account (Figure 2.15).

Figure 2.15: Proportion of Enterprises with Mobile Money Account by Economic Activity, Malawi 2019



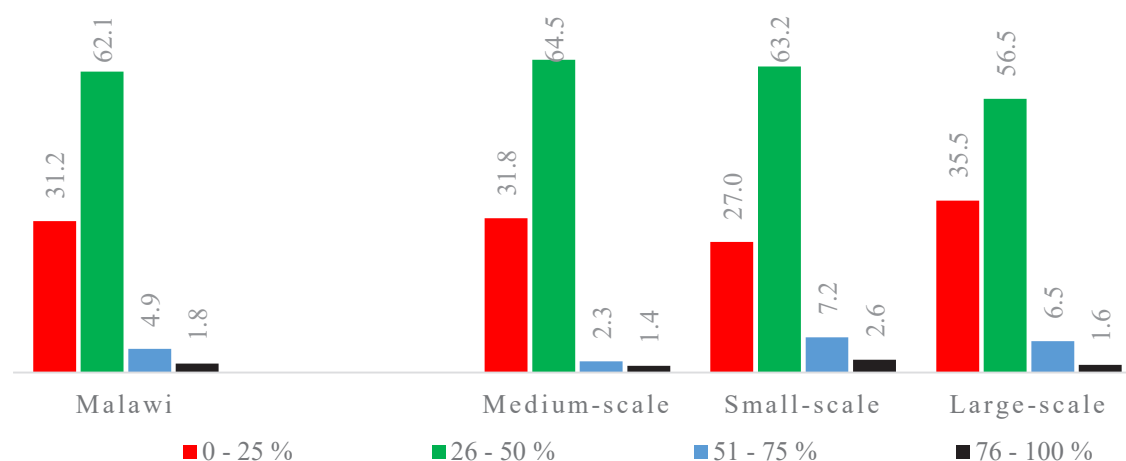
Source: National Enterprise ICT Survey, 2019

2.1.7. Payments Received Using Mobile Payments and Mobile Money Accounts

This section presents the proportion of enterprises that received payments using mobile payments and mobile money accounts by enterprise size.

Overall, payments received using mobile payments and mobile money accounts were between 26-50 percent as reported by 62.1 percent of the enterprises. About 2 percent of the enterprises received between 76-100 percent of their payments using the mobile payments and mobile money platforms (Figure 2.16).

Figure 2.16: Proportion of Payments Received Using Mobile Payments and Mobile Money Accounts by Size of Enterprises, Malawi 2019

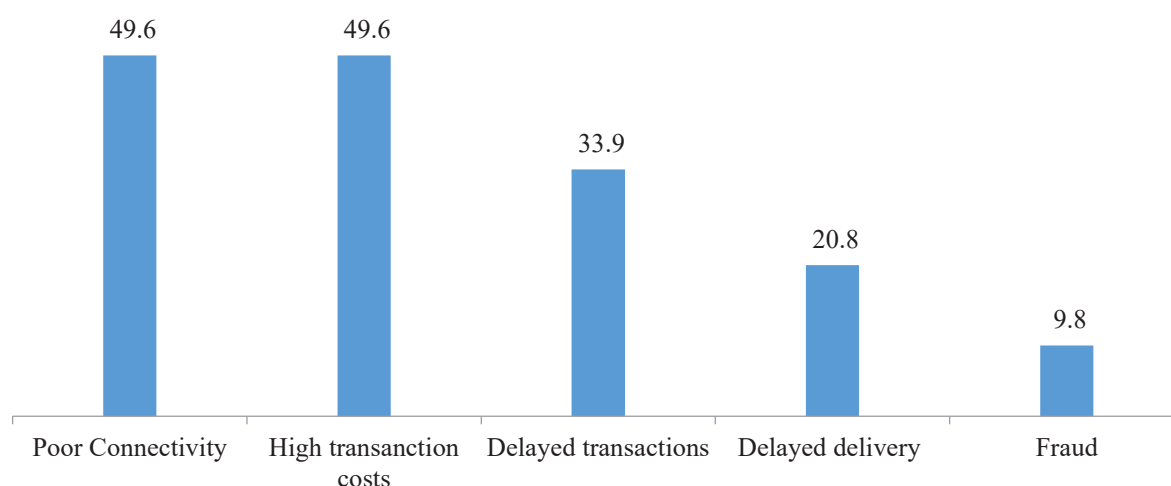


Source: National Enterprise ICT Survey, 2019

2.1.8. Challenges Encountered by Enterprises with Mobile Payment and Mobile Money Accounts

The highest proportion of enterprises reported poor connectivity and high transaction costs as their biggest challenges each at 49.6 percent. About 10 percent of the enterprises reported fraud as a challenge when using mobile payment and mobile money account (Figure 2.17).

Figure 2.17: Challenges Encountered by Enterprises with Mobile Payment and Mobile Money Accounts, Malawi 2019



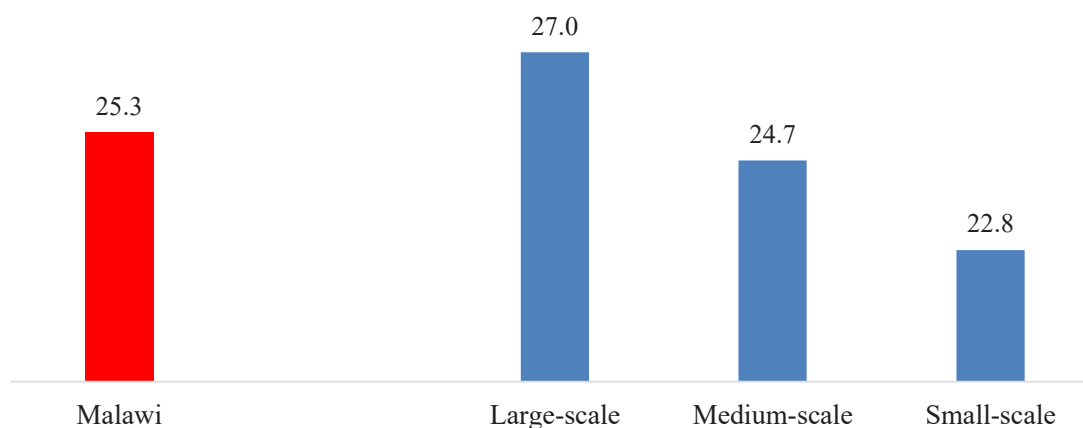
Source: National Enterprise ICT Survey, 2019

2.1.9. Use of Mobile Banking Platforms

Mobile banking is a service provided by banks or other financial institutions that allow its customers to conduct financial transactions remotely using a mobile device for example National bank MO626, NBS Easy mobile, and Standard bank 24/7.

About 25 percent of the enterprises were using mobile banking platforms. Analysis by size of enterprise shows that large scale enterprises had the highest proportion of enterprise using mobile banking platforms at 27.0 percent, followed by medium enterprises at 24.7 percent and small scale enterprises at 22.8 percent (Figure 2.18).

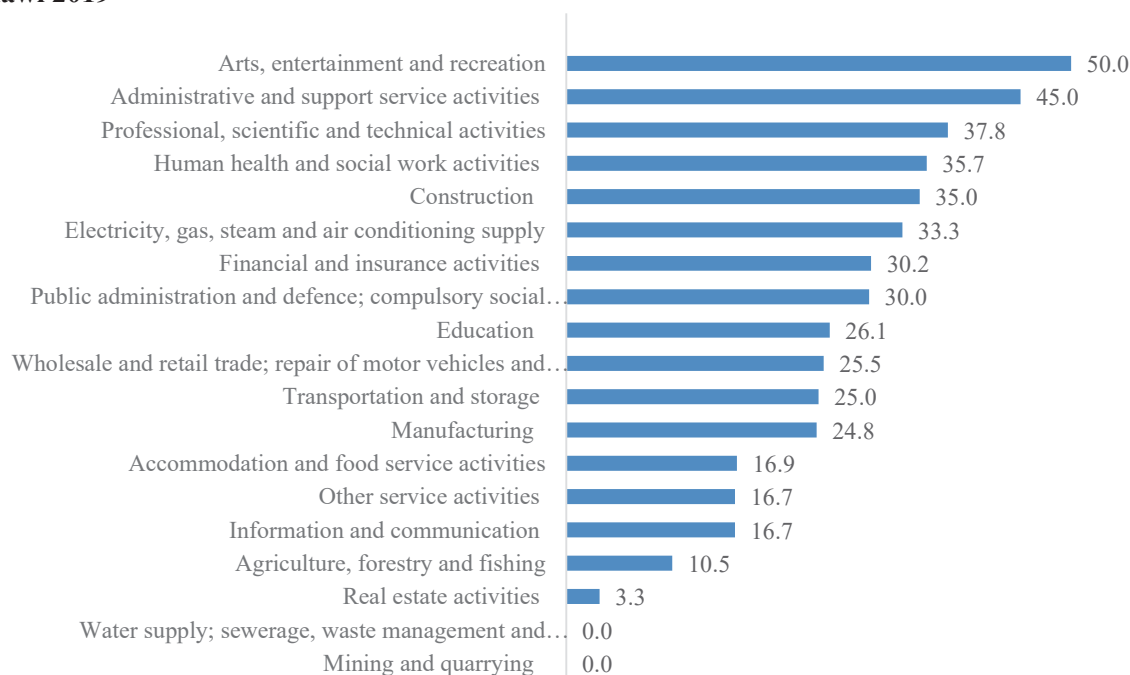
Figure 2.18: Proportion of Enterprises using Mobile Banking Platforms by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

The results show that 50.0 percent of the enterprises in Arts, entertainment and recreation section, 45.0 percent in Administrative and support services activities section; and 37.8 percent in Professional, scientific and technical activities section used mobile banking platform. Water supply, sewerage, waste management and remediation activities; and mining and quarrying sections reported almost 0.0 percent of the enterprises using mobile banking platforms (Figure 2.19).

Figure 2.19: Proportion of Enterprises Using Mobile Banking Platforms by Economic Activity, Malawi 2019

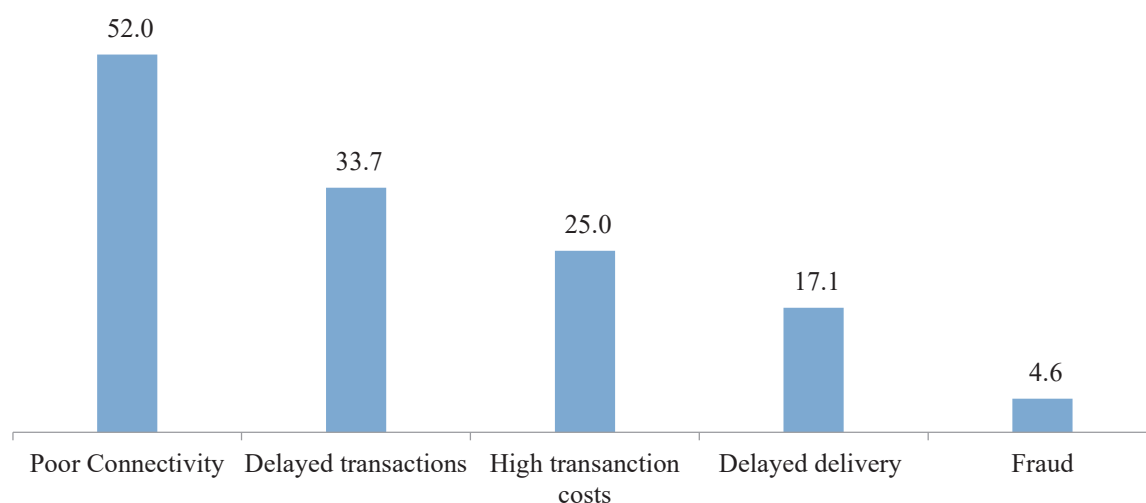


Source: National Enterprise ICT Survey, 2019

2.1.10 Challenges Encountered when Using Mobile Banking

About 55 percent of the enterprises cited poor connectivity as the challenge encountered when using mobile banking platform and 33.7 percent cited high transaction costs. About 5 percent of the enterprises reported fraud as a challenge when using mobile banking platform (Figure 2.20).

Figure 2.20: Challenges Encountered when Using Mobile Banking, Malawi 2019



Source: National Enterprise ICT Survey, 2019

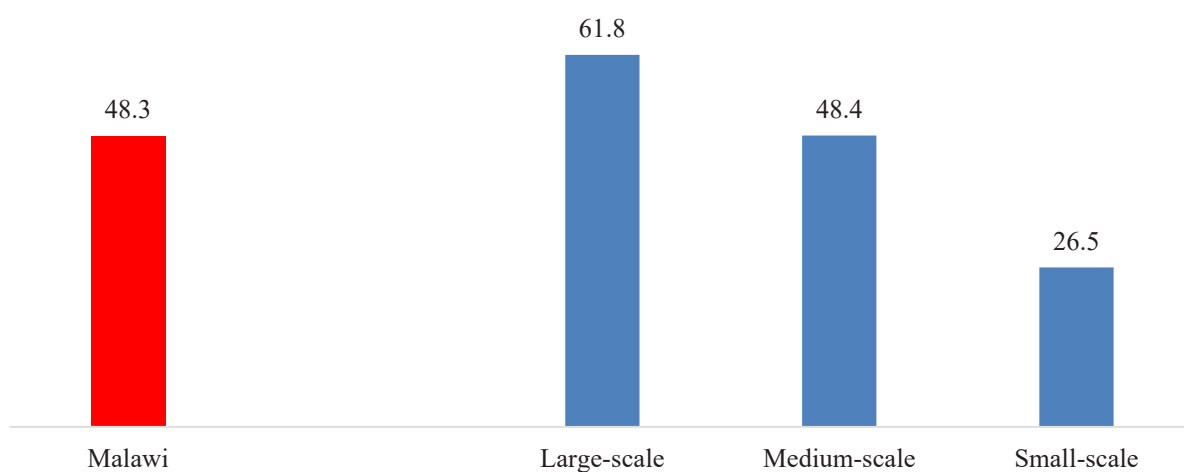
2.2 Use of Fixed Telephone

Before the introduction of mobile telecommunication, enterprises were mostly using fixed telephone popularly known as land lines for communication. The survey also aimed at establishing if enterprises used fixed telephone for communicating their business transactions for example placing or receiving orders etc.

2.2.1 Enterprises with Fixed Telephones

Overall, 48.3 percent of the enterprises had a dedicated fixed telephone for business purposes. About 62 percent of the large scale enterprises, 48.4 percent of the medium scale enterprises and 26.5 percent of the small scale enterprises had a dedicated fixed telephone (Figure 2.21).

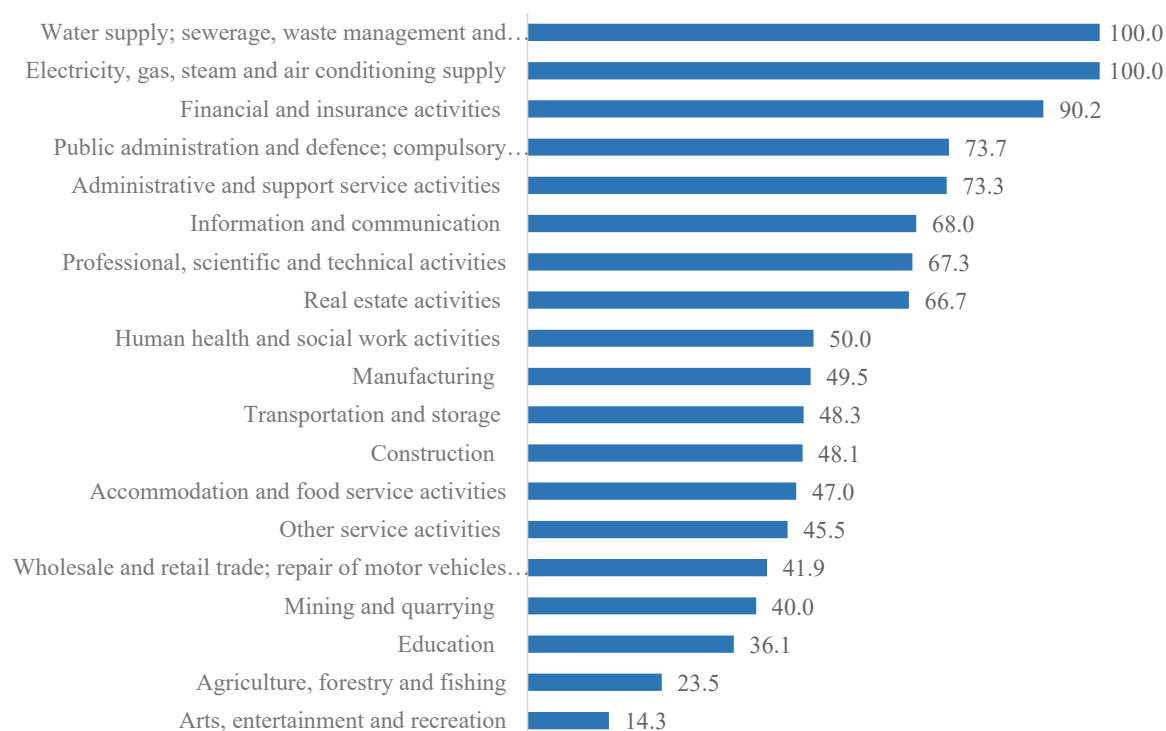
Figure 2:21 Proportion of Enterprises with a Dedicated Fixed Telephone by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Electricity, gas, steam and air conditioning supply; and water supply, sewerage, waste management, and remediation activities sections registered 100 percent of enterprises with fixed telephones followed by the financial and insurance activities section with 90.2 percent. The lowest proportion of enterprises with a dedicated fixed telephone was observed in arts, entertainment and recreation section at 14.3 percent (Figure 2.22).

Figure 2:22 Proportion of Enterprises with a Dedicated Fixed Telephone by Economic Activity, Malawi 2019

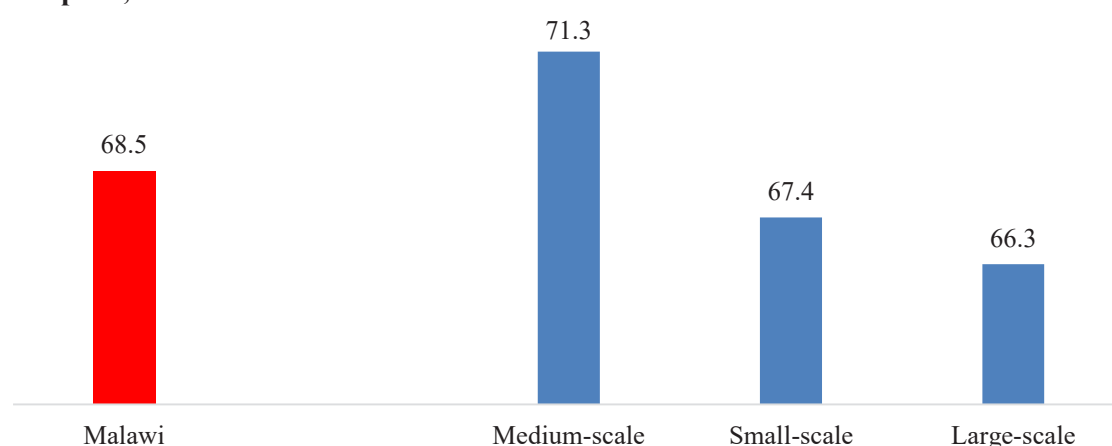


Source: National Enterprise ICT Survey, 2019

2.2.2 Enterprise Receiving Orders using Fixed Telephones

About 69 percent enterprises received orders using fixed telephone in Malawi. Use of fixed telephone to receive orders was more common in medium scale enterprises with 71.3 percent followed by small scale enterprises at 67.4 percent and large scale enterprises at 66.3 percent (Figure 2.23).

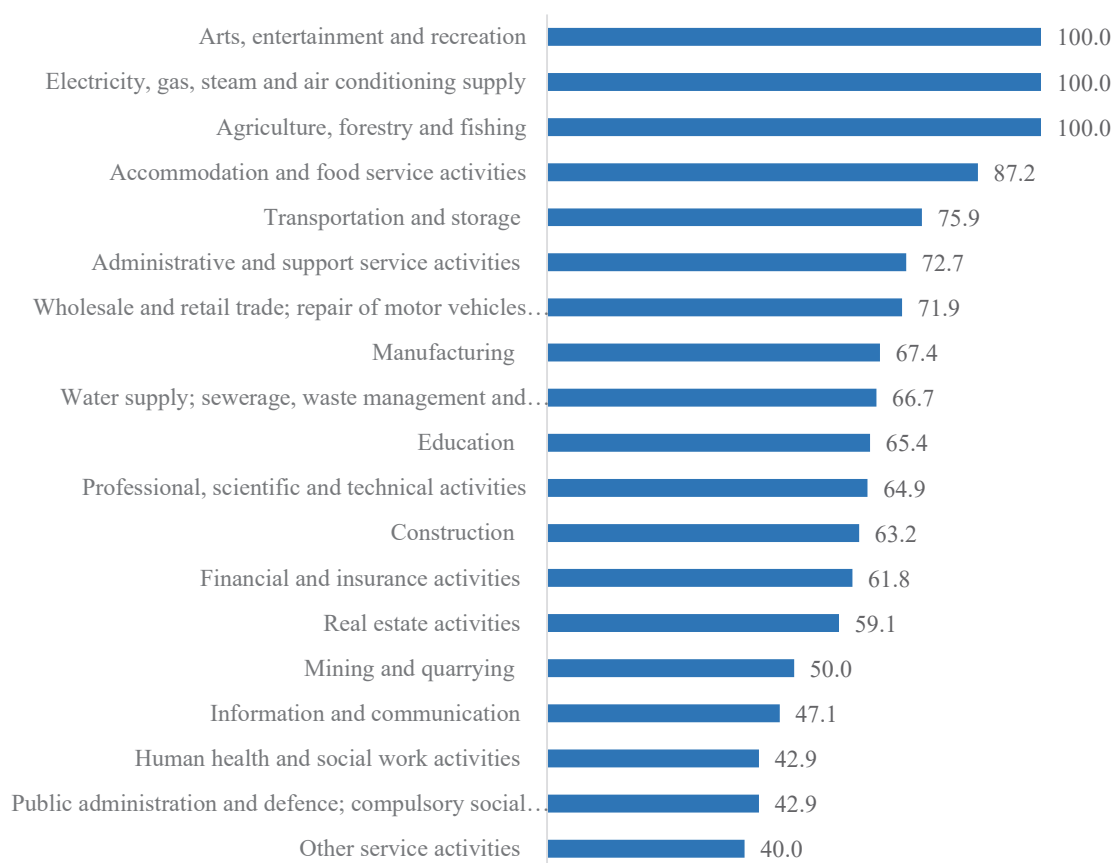
Figure 2:23: Proportion of Enterprises that Received Orders Using Fixed Telephones by Size of Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Arts, entertainment, and recreation activities; electricity, gas, steam, air conditioning supply; and agriculture, forestry and fishing sections had the highest proportion of enterprises receiving orders via fixed telephone at 100 percent each. Other service activities had the least proportion of orders received using fixed telephones at 40.0 percent (Figure 2.24).

Figure 2:24: Proportion of Enterprises that Received Orders Using Fixed Telephones by Economic Activity, Malawi 2019

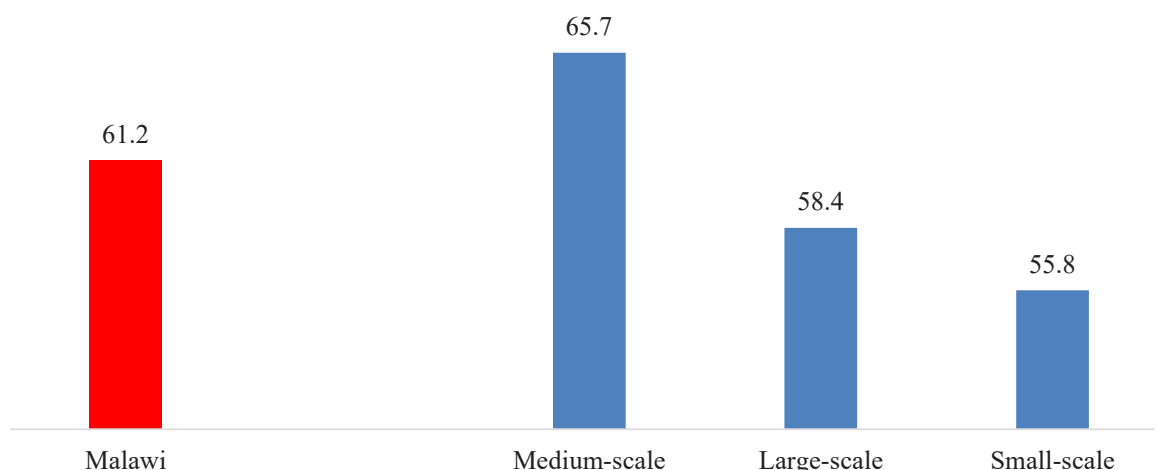


Source: National Enterprise ICT Survey, 2019

2.2.3 Enterprise Placing Orders Using Fixed Telephones

About 62 percent of the enterprises placed orders using fixed telephone. Medium scale enterprise reported the highest use of fixed telephones to place orders at 65.7 percent, followed by large scale enterprises at 58.4 percent and small scale enterprises at 55.8 percent.

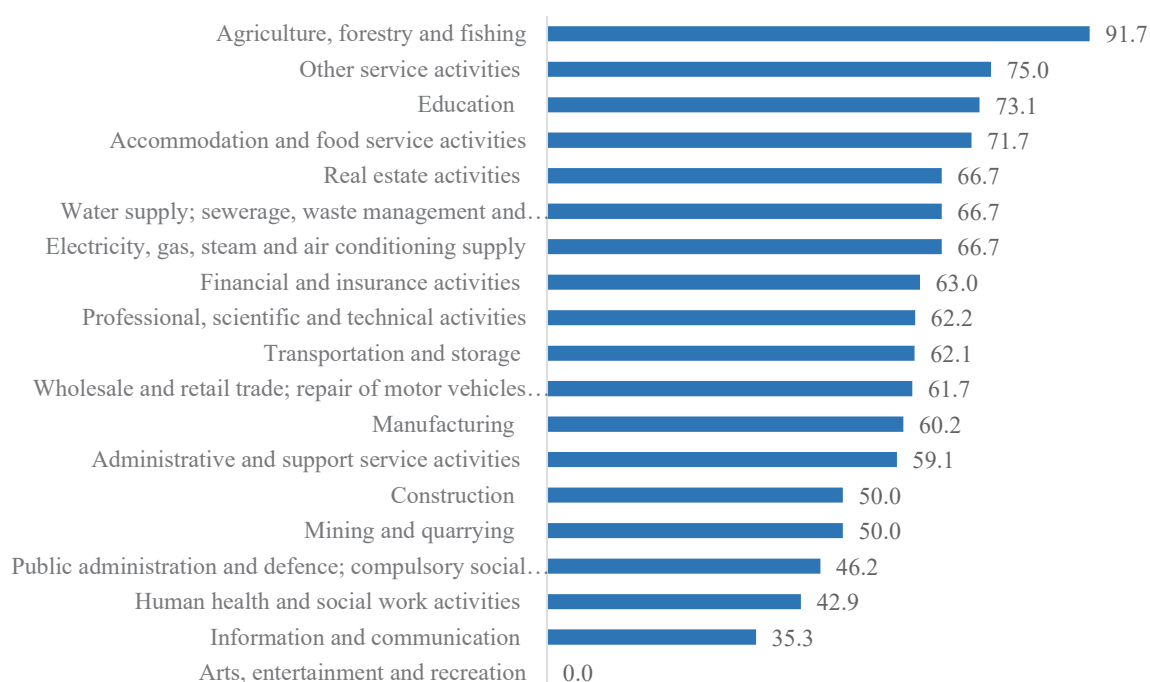
Figure 2:25: Proportion of Enterprises that Placed Orders using Fixed Telephones by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Agriculture, forestry and fishing section had the highest proportion of enterprises placing orders via fixed telephone at 91.7 percent followed by other services at 75.0 percent. The least use of fixed telephone lines in placing orders were Arts, entertainment and recreation sections at almost 0.0 percent. (Figure 2.26).

Figure 2:26: Proportion of Enterprises that Placed Orders Using Fixed Telephones by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

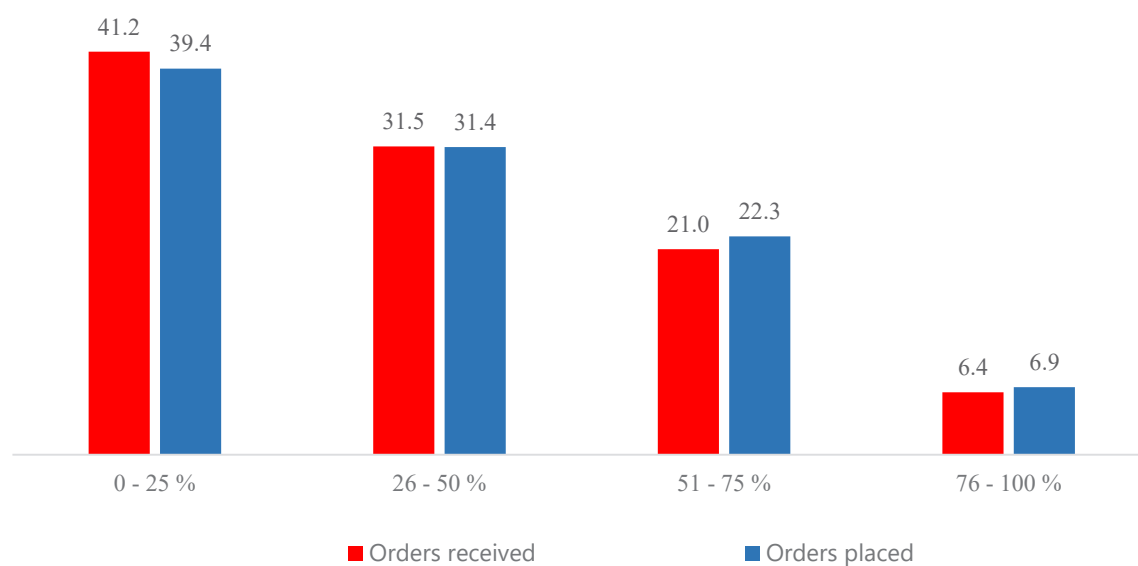
2.2.4 Orders Received and Placed using Fixed Telephones

Enterprises were asked to state the proportion of orders placed or received via fixed or landline to total orders that the enterprise placed or received.

The highest proportion of orders received via fixed phones was within the range of 0-25 percent at 41.2 while 6.4 percent of the enterprises received 76-100 percent of their orders using fixed telephones.

About 39 percent of the enterprises placed 0-25 percent of their orders using fixed telephones while 6.9 percent placed 76-100 percent of their orders through fixed telephones (Figure 2.27).

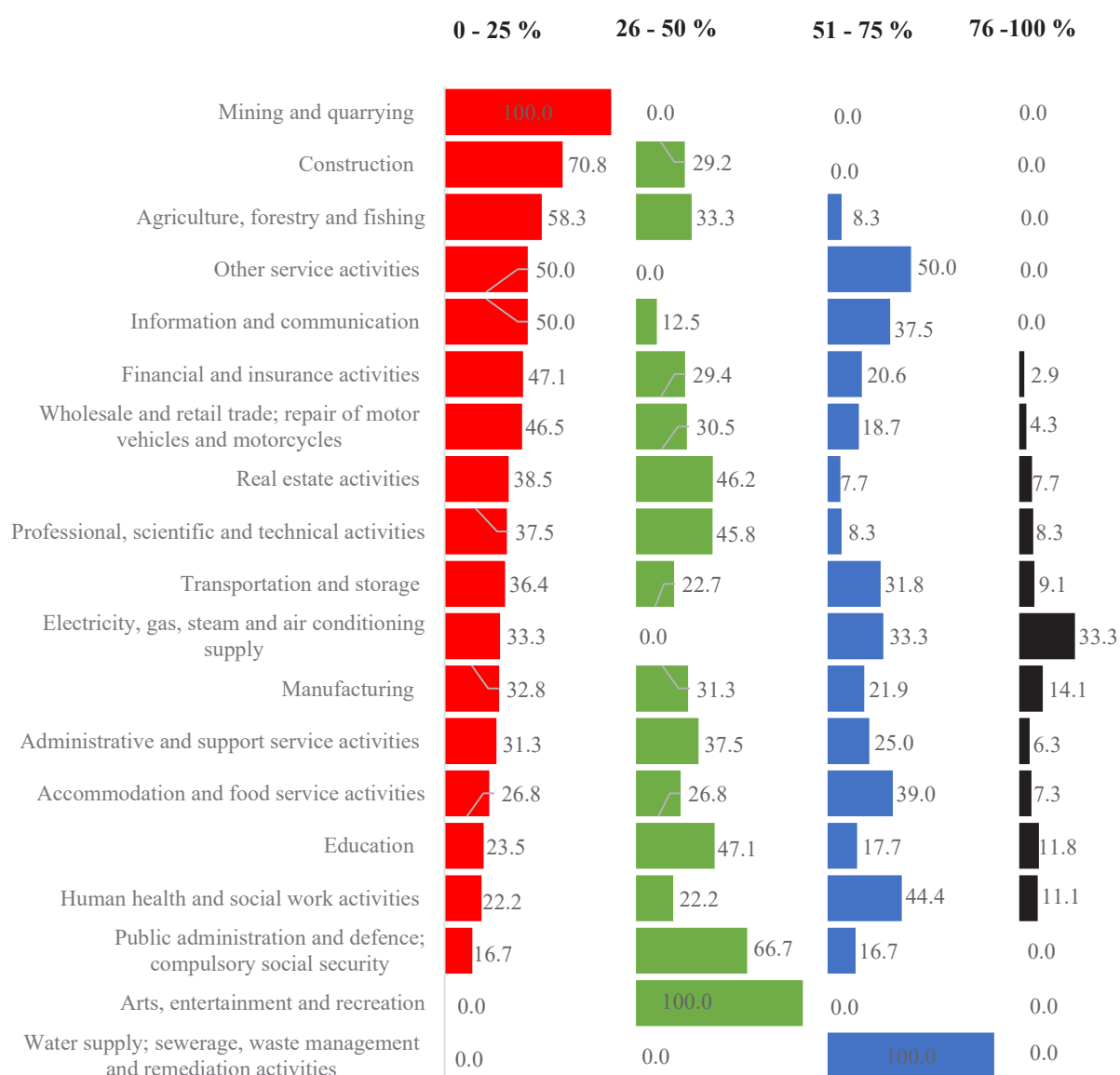
Figure 2:27 Proportion of Orders Received and Placed using Fixed Telephones, Malawi 2019



Source: National Enterprise ICT Survey, 2019

In terms of economic activities, all orders received and placed using fixed phones for the Mining and quarrying sections were within the range of 0-25 percent. Regarding water supply, sewerage, waste management sector, all orders placed via fixed telephones were within the range of 51- 75 percent. Arts, entertainment and recreation section all orders placed were within the range of 26 – 50 percent of total orders that were placed (Figure 2.28).

Figure 2:28 Proportion of Orders Received Using Fixed Telephones by Economic Activity, Malawi 2019

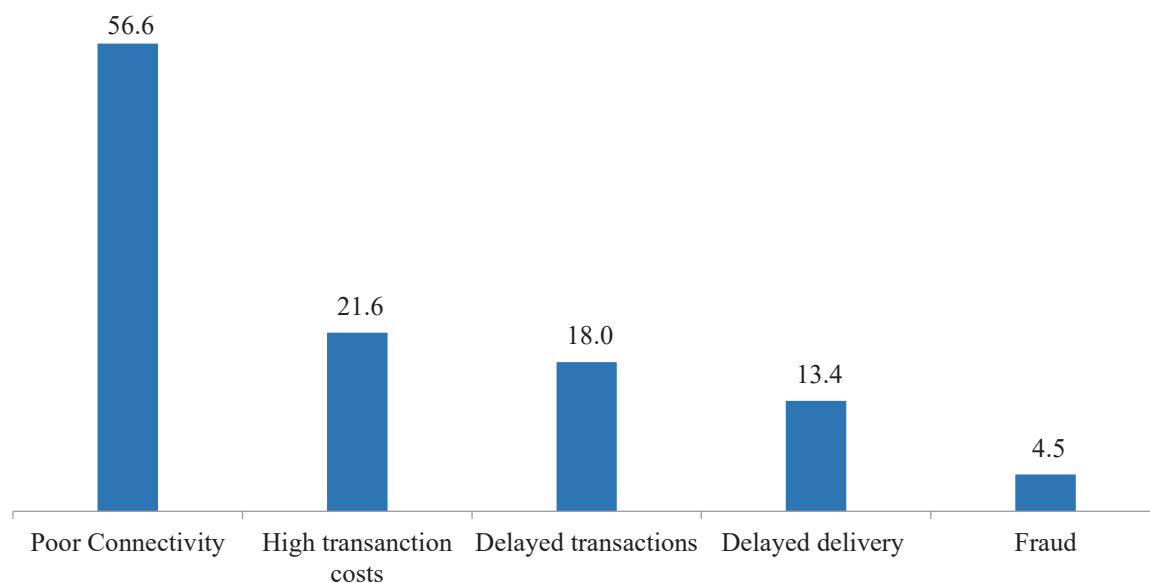


Source: National Enterprise ICT Survey, 2019

2.2.5. Challenges Encountered When Receiving and Placing Orders via Fixed Telephones

The results show that 56.6 percent of the enterprises reported poor connectivity as the challenge encountered when receiving or placing orders via fixed telephones followed by 21.6 percent that reported high transaction costs. About 5 percent of the enterprises reported fraud as a challenge (Figure 2.29).

Figure 2:29 Challenges Encountered when Receiving and Placing Orders via Fixed Telephones, Malawi 2019



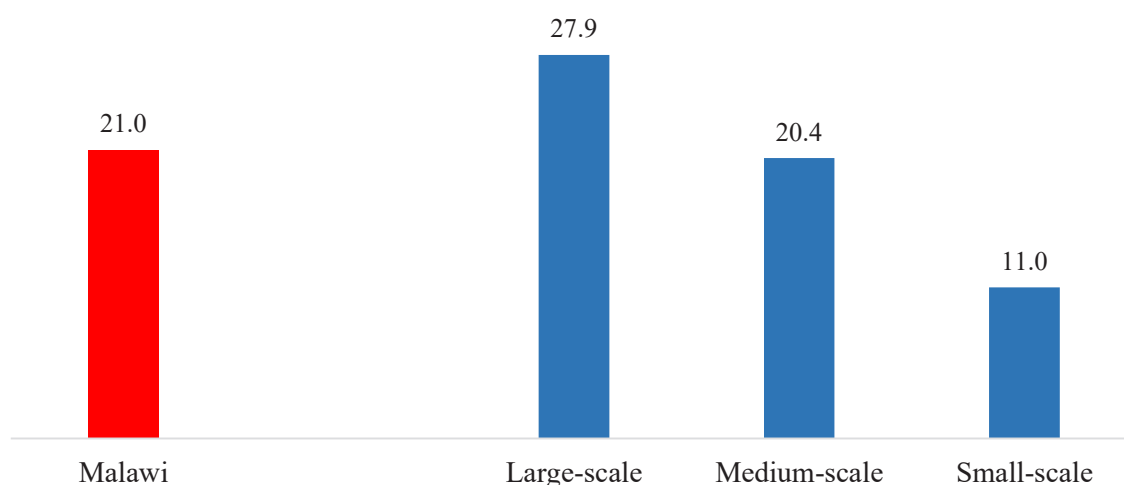
Source: National Enterprise ICT Survey, 2019

2.3 Use of Facsimile (Fax)

2.3.1 Enterprises with Facsimile

Overall, 21.0 percent of the enterprises had a dedicated fax line in 2019. Large enterprises had the highest proportion of businesses using facsimiles at 27.9 percent followed by medium scale enterprises at 20.4 percent and small scale enterprises at 11.0 percent (Figure 2.30).

Figure 2:30 Proportion of Enterprises Using Facsimile by Size of Enterprises-, Malawi 2019

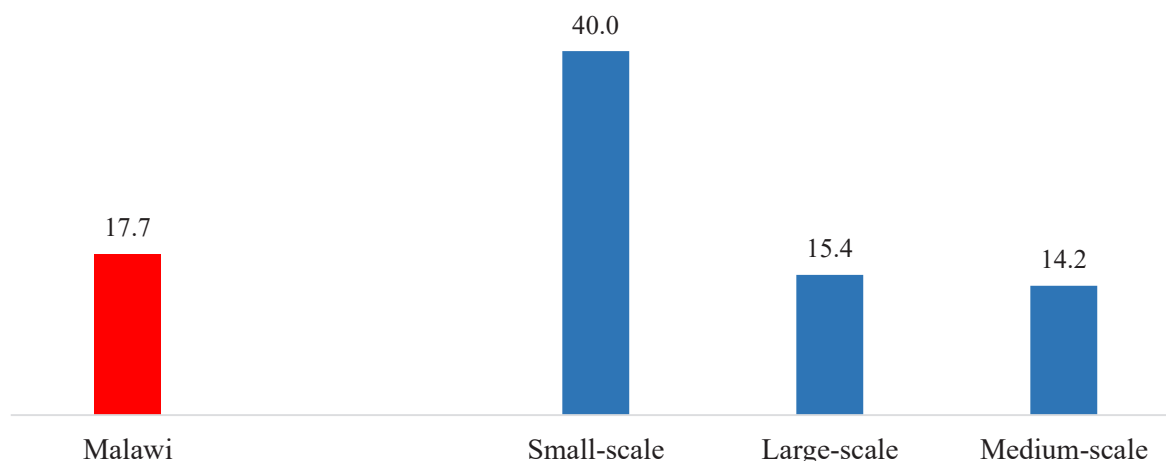


Source: National Enterprise ICT Survey, 2019

2.3.2 Enterprise Receiving Orders using Facsimile

Enterprises that received orders using facsimile were 17.7 percent. Use of facsimile to receive orders was common in small scale enterprises at 40.0 percent followed by large scale enterprises at 15.4 percent and medium scale enterprise at 14.2 percent (Figure 2.3.1).

Figure 2:31 Proportion of Enterprises Receiving Orders using Facsimile by Size of Enterprises, Malawi 2019

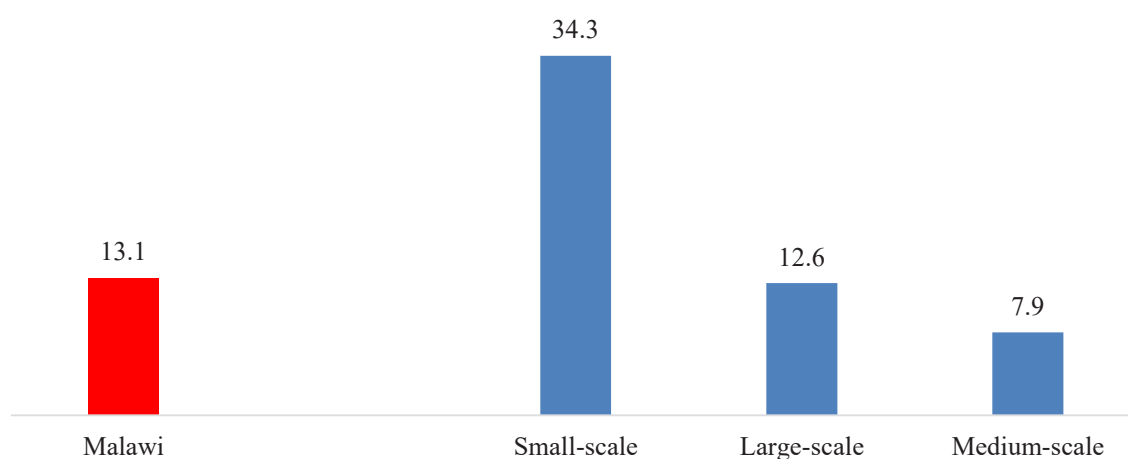


Source: National Enterprise ICT Survey, 2019

2.3.3 Enterprise Placing Orders Using Facsimile

About 13 percent of the enterprises placed orders using facsimile in Malawi in 2019. Use of facsimile to place orders was common in small scale enterprises at 34.3 percent followed by large scale enterprises at 12.6 percent and medium scale enterprise at 7.9 percent (Figure 2.32).

Figure 2:32 Proportion of Enterprises Placing Orders using Facsimile by Size of Enterprises, Malawi 2019



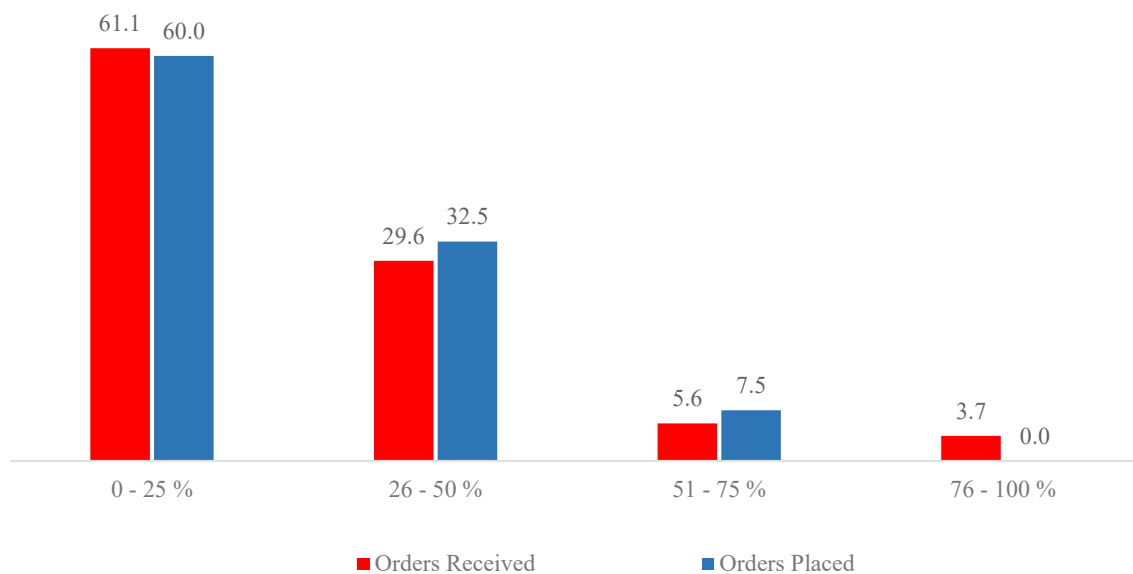
Source: National Enterprise ICT Survey, 2019

2.3.4 Orders Received and Placed using Facsimile

The highest proportion of orders received using facsimile was within the range of 0-25 percent at 61.1 percent while 3.7 percent of the enterprises received 76-100 percent of their orders using the facsimile.

About 60 percent of the enterprises placed 0-25 percent of their orders using facsimile while none of the enterprises placed 76-100 percent of their orders using facsimile (Figure 2.33).

Figure 2.33: Proportion of Orders Received and Placed using Facsimile, Malawi 2019



Source: National Enterprise ICT Survey, 2019

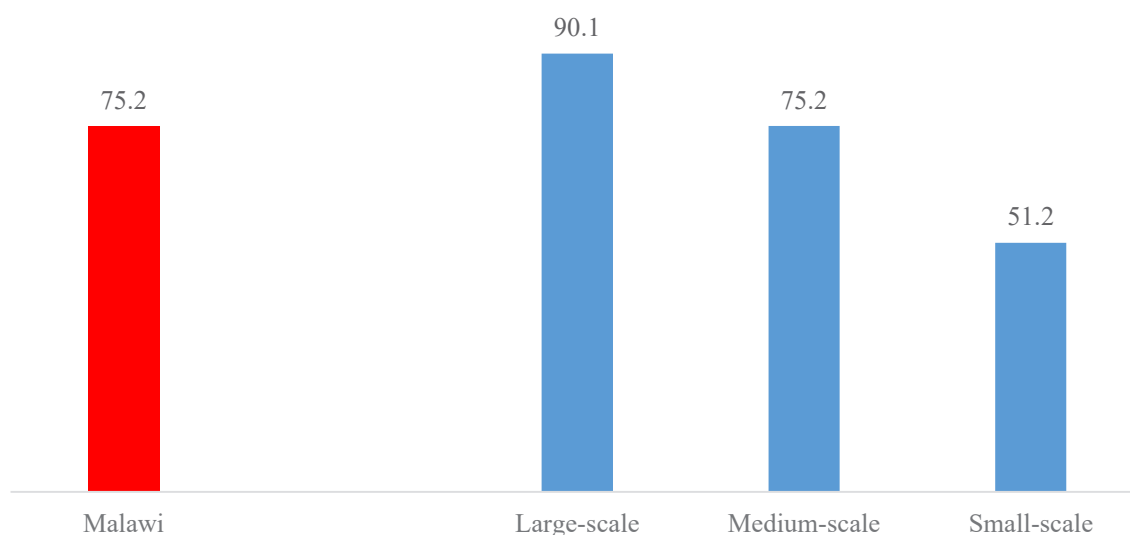
3 USE OF COMPUTERS AND OTHER DEVICES

In the modern world of entrepreneurship computers are playing pivot roles to speed up the business processes of production, marketing and distribution. Businesses have now started online procurement that require use of computers. Businesses involved in marketing now use computers to create marketing and advertising materials by using computer-based applications like adobe Photoshop, Corel draw, online designing tools etc. Large businesses are now using Hybrid Computer technologies to hasten up process and reduce significantly the cost of production. This chapter will look at the enterprises use of computers and other computer related devises in their daily operations.

3.1 Use of Computers

The results indicate that 75.2 percent of all enterprises used computers in their daily operations. Among the large scale enterprises, 90.1 percent used computers followed by Medium scale enterprises at 75.2 percent and small-scale enterprises at 51.2 percent (Figure 3.1).

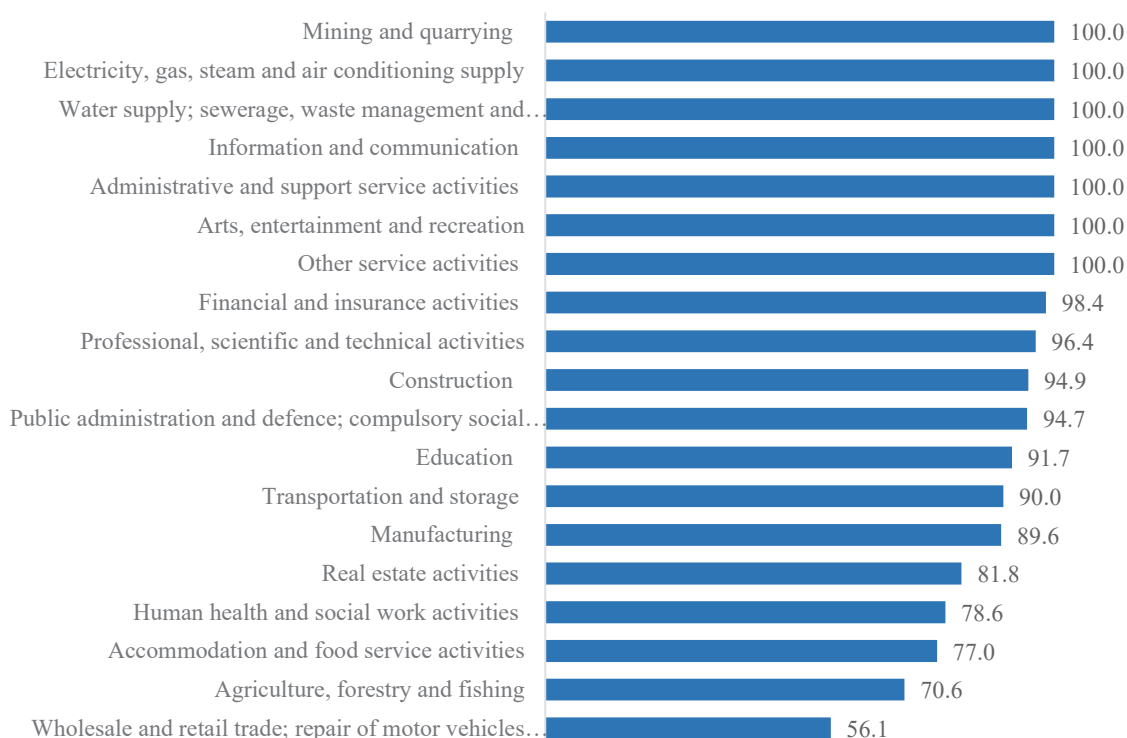
Figure 3.1: Proportion of Enterprise that used Computers by Size of the Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activities, 100 percent of the enterprises in Mining and quarrying; Electricity, gas, steam and Air conditioning supply; Water supply, sewerage, waste management; Information and Communication; Administrative and support services activities; Arts, entertainment and recreational services and Other services activities used computers in 2019. Accommodation and food services activities; and Agriculture, Forestry and Fisheries recorded 77.0 percent and 70.6 percent usage of computers respectively. Wholesale and retail trade, repair of motor vehicles recorded the lowest proportion of enterprises that used computers in 2019 at 56.1 percent (Figure 3.2)

Figure 3.2: Proportion of Enterprises that used Computers by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

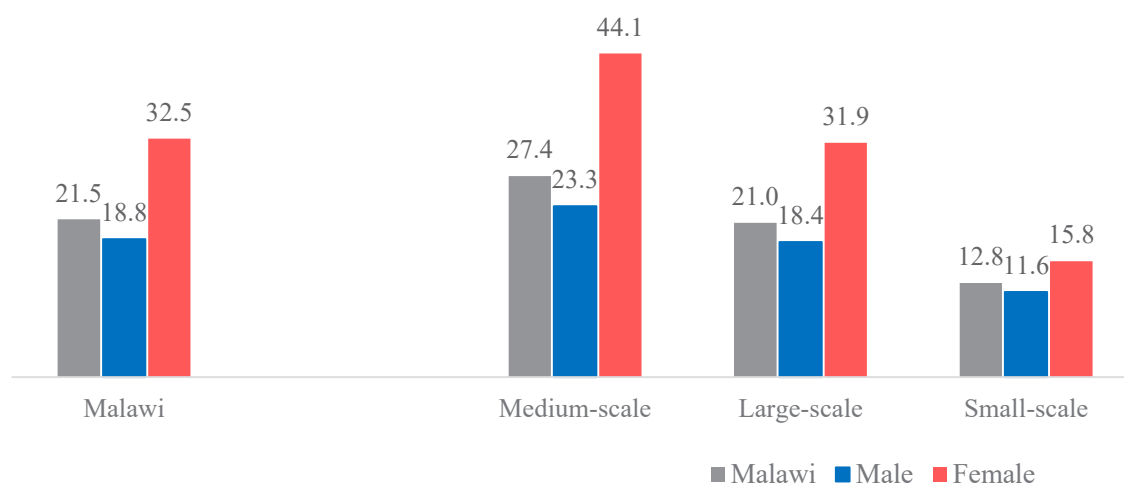
3.2: Employees using a Computer Routinely for Office Use

The survey also established the proportion of employees within the enterprises that routinely or at least once a week used a computer for business purposes at work during the 2019 reference period.

The results indicate that 21.5 percent of employees used computers. The proportion of female employees using computers was 32.5 percent while for male employees was 18.8 percent.

The highest proportion of female employees using computers was for medium scale enterprises at 44.1 followed by 31.9 percent in large scale enterprises and 15.8 percent for the small scale enterprises (Figure 3.3).

Figure 3.3: Proportion of Employees that Used a Computer by Gender and Size of the Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

By economic activities, Financial and insurance activities section had more of its employees (85.4 percent) using a computer at least once a week followed by employees in Professional, scientific and technical activities section at 80.6 percent. Agriculture, forestry and fishing section recorded the lowest proportion of employees (3.6 percent) that routinely used a computer for work purposes (Figure 3.4).

Figure 3.4: Proportion of Employees that Used a Computer by Economic Activity, Malawi 2019



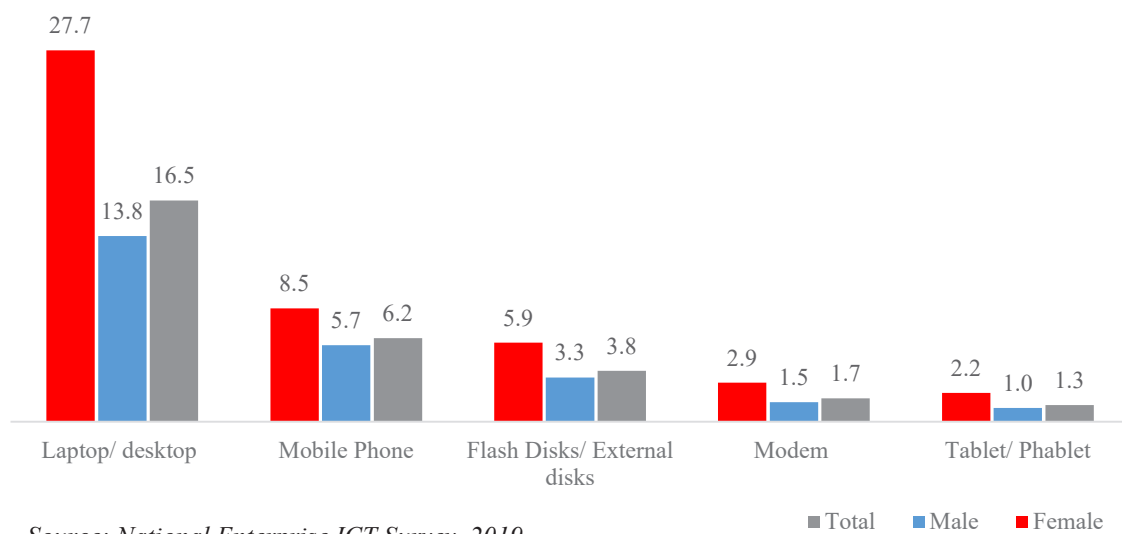
Source: National Enterprise ICT Survey, 2019

3.3 Employees Provided with ICT Equipment

The survey also sought to find out the type of ICT equipment that institutions provide to its employees for use in their daily work- related functions.

The results show that 16.5 percent of employees were provided with laptops followed by mobile phones at 6.2 percent. The proportion of employees that were provided with laptops was higher for females at 27.7 percent than for males at 13.5 percent (Figure 3.5).

Figure 3.5: Proportion of Employees Provided with ICT Equipment by Gender and Type of Equipment, Malawi 2019



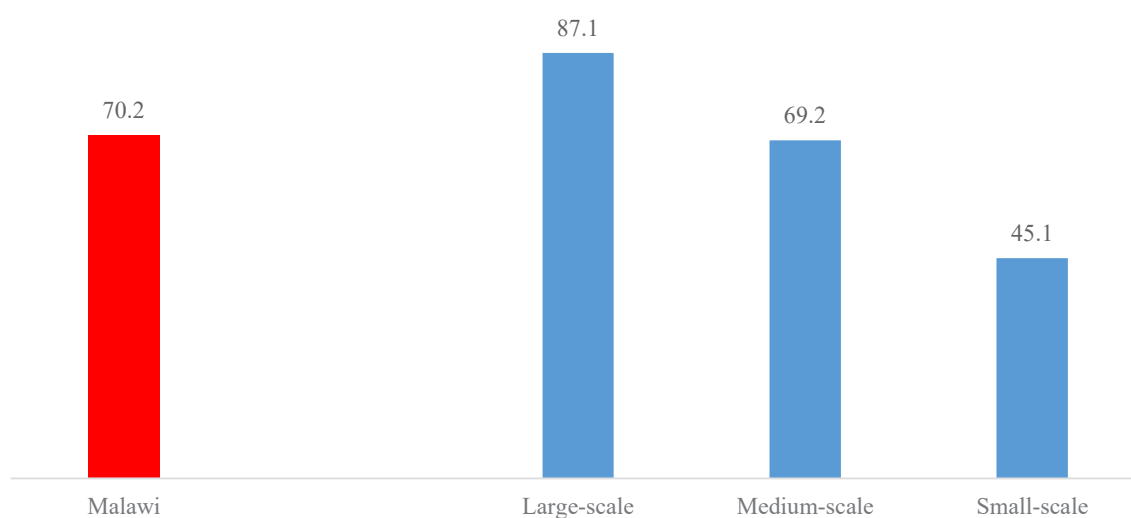
4 ACCESS AND USE OF INTERNET

Internet is a global computer network providing a variety of information and communication facilities that interconnect networks by using standardized protocols. Internet assists enterprises to fasten the processes and opens up new opportunities for the enterprises.

4.1 Enterprises with Internet Connectivity

Overall, 70.2 percent of the enterprises had internet in their premises. Analysis by size of the enterprise shows that 87.1 percent of large scale enterprises had internet in their premises followed by medium scale enterprises at 69.2 percent and small scale enterprises at 45.1 percent (Figure 4.1).

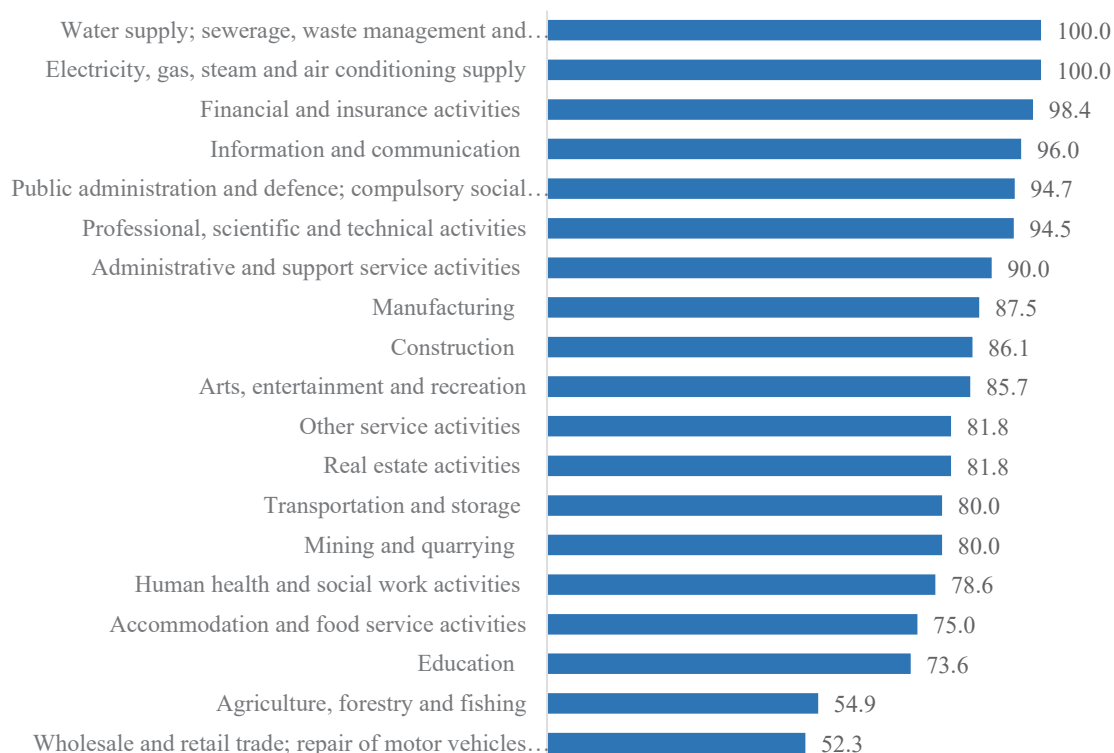
Figure 4.1: Proportion of Enterprises with Internet Connectivity by Size of the Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activities shows that Water supply, Sewerage, waste management and remediation activities; and Electricity, gas, steam and air conditioning supply recorded 100 percent internet connectivity followed by Financial and insurance activities at 98.4 percent. Wholesale and retail trade; repair of motor vehicles and motorcycles recorded the lowest proportion at 52.3 percent (Figure 4.2).

Figure 4.2: Proportion of Enterprises with Internet Connectivity by Economic Activity, Malawi 2019



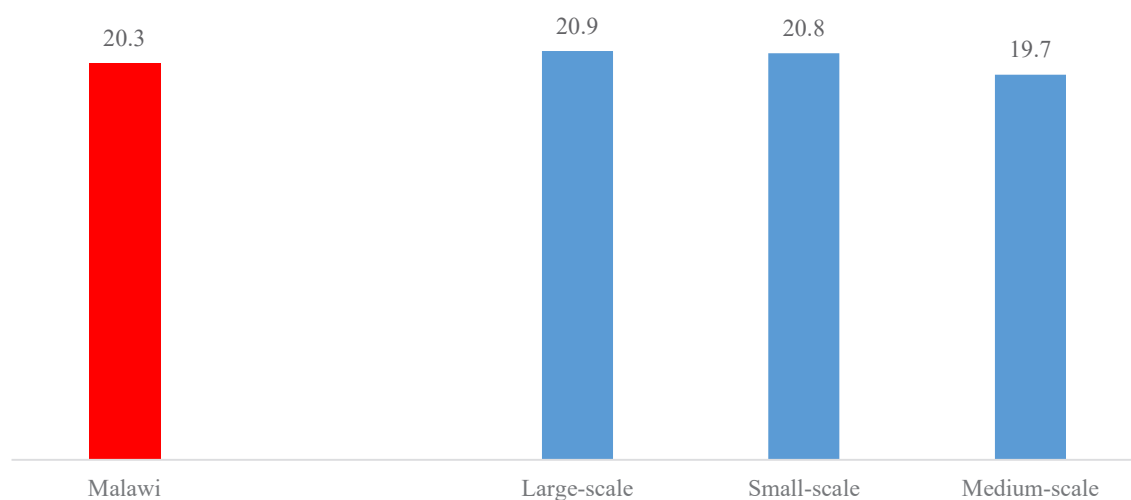
Source: National Enterprise ICT Survey, 2019

4.2 Enterprises with Access to Internet for Official Purpose

Enterprises that reported not to have internet connectivity for their businesses were asked if at all they accessed internet for official purposes at other premises such as cyber café or any other offices.

Overall, 20.3 percent of these enterprises that did not have internet connectivity reported that they used internet for official purposes at other premises. Analysis by firm size indicates that 20.9 percent of large scale enterprises reported to have used internet for official purposes at other premises followed by small scale enterprises at 20.8 percent and medium scale enterprise at 19.7 percent (Figure 4.3)

Figure 4.3: Proportion of Enterprises with Access to Internet for Official Purposes by Size of Enterprises, Malawi 2019

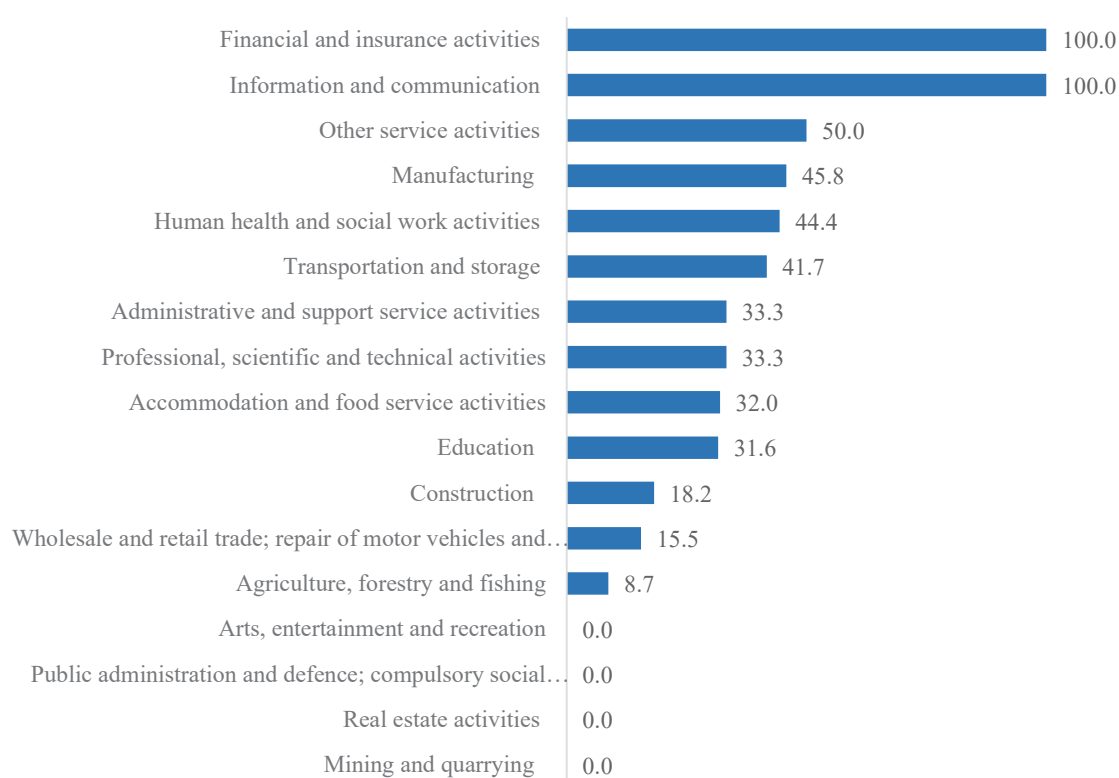


Source: National Enterprise ICT Survey, 2019

Analysis by economic activity indicates that all the enterprises (100 percent) in Financial and insurance activities; and Information and communication activities that did not have internet connectivity accessed internet for official use at some other premises. Half (50 percent) of enterprises in the other service activities indicated that they had access to internet.

All enterprises (100 percent) in Arts, entertainment and recreation; Public administration and defense; compulsory social security; Real estate activities and Mining and quarrying that did not have internet connectivity reported that they did not also access internet from other places for official use (Figure 4.4).

Figure 4.4: Proportion of Enterprises with Access to Internet for Official Purposes by Economic Activity, Malawi 2019



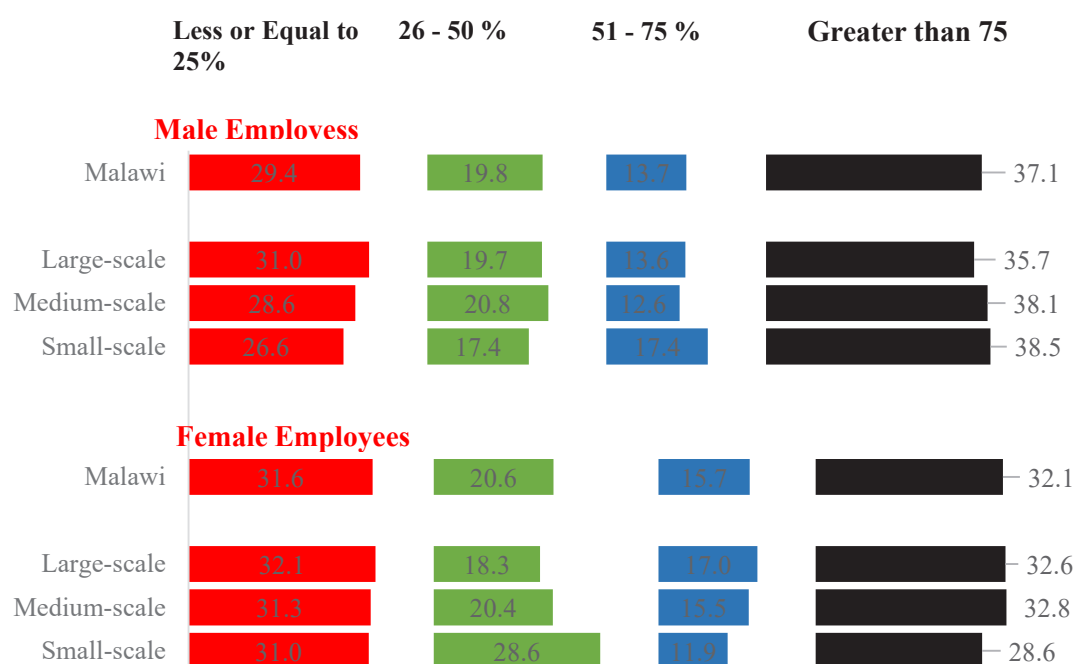
Source: National Enterprise ICT Survey, 2019

4.3 Employees Use of Internet for Business Purpose

The survey wanted to find out the proportion of employees in enterprises that were able to use internet for business purposes.

Overall, 37.1 percent of enterprises had between 76-100 percent of their male employees using internet for business purposes while 29.4 percent of enterprises had less or equal to 25 percent of their male employees using internet. Regarding female employees, 32.1 percent of enterprises reported that 76-100 percent of their female employees used internet for business purposes while 31.6 percent had less or equal to 25 percent of their female employees that used internet for business purposes (Figure 4.5).

Figure 4.5: Proportion of Employees that Used Internet for Business Purpose by Gender, Malawi 2019



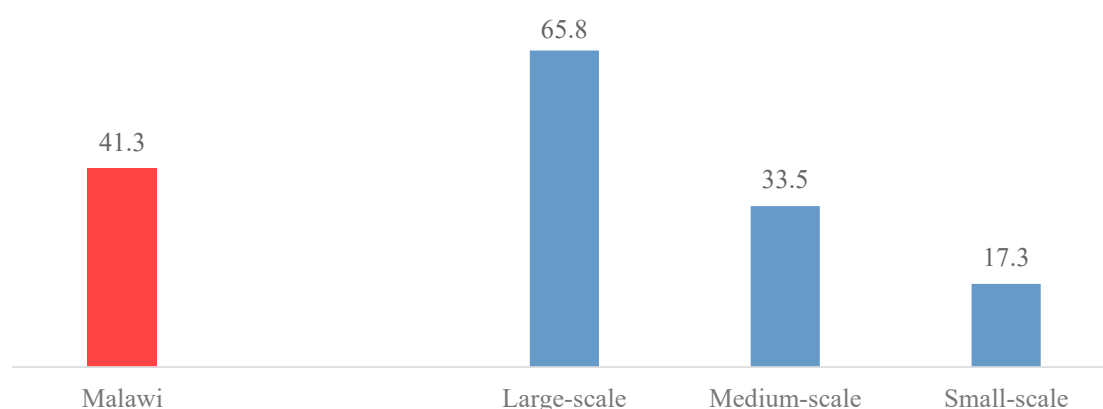
Source: National Enterprise ICT Survey, 2019

4.4 Use of Local Area Network (LAN)

Local Area Networks play a vital role in achieving information sharing which connects computers within or outside a building.

The survey findings show that 41.3 percent of enterprises used local area networks. Analysis by the size of enterprises shows that 65.8 percent of large scale enterprises used LAN followed by medium scale enterprise at 33.5 percent and small scale enterprises at 17.3 percent (Figure 4.6).

Figure 4.6: Proportion of Enterprises Using Local Area Networks by Size of Enterprises, Malawi 2019

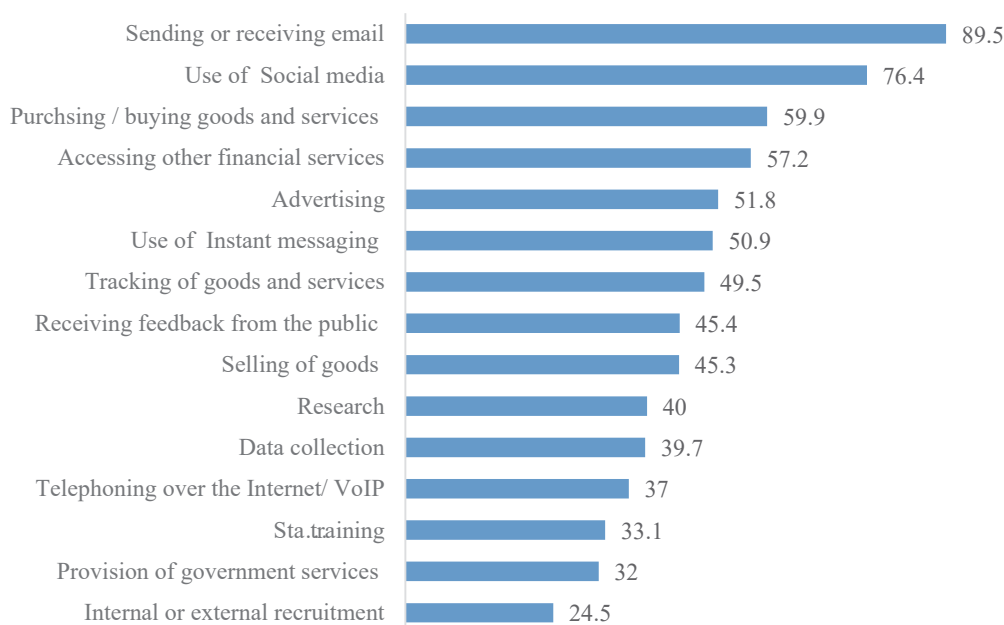


Source: National Enterprise ICT Survey, 2019

4.5 Enterprise Activities Performed Using the Internet

The results shows that 89.5 percent of enterprises used internet for sending or receiving email, 76.4 percent used it for social media and 59.9 percent used it for purchasing/buying of goods and services. About 25 percent of enterprises used it for internal or external recruitment (Figure 4.7).

Figure 4.7: Proportion of Activities Performed by Enterprises Using the Internet by Type of Internet Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

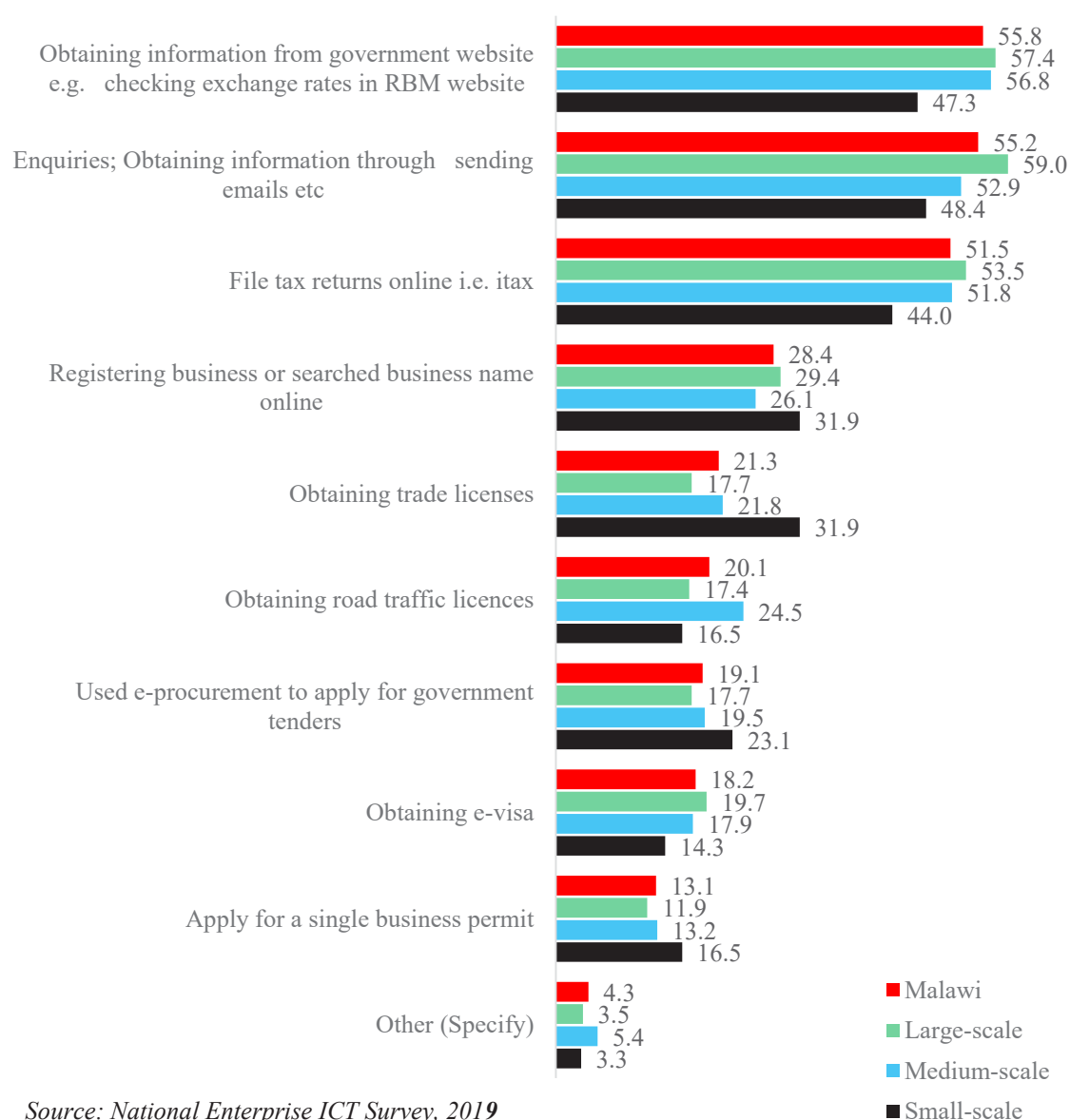
4.6 Use of e-Government services

E-Government refers to use of communications technology devices such as computers and the internet to provide public services in a country or region.

The results show that 55.8 percent of the enterprises used e-government services to obtain information from government through the website, 55.2 percent to obtain information through email and 51.5 percent for filing of tax returns.

Analysis by the size of enterprises shows that large scale enterprises had the highest proportion (57.4 percent) of enterprise that used e-government services to obtain information from government through the website followed by medium scale enterprises at 56.8 percent and small scale enterprises at 47.3 percent (Figure 4.8).

Figure 4.8: Proportion of E-Government Services Most Used by Enterprises by Size of Enterprise, Malawi 2019

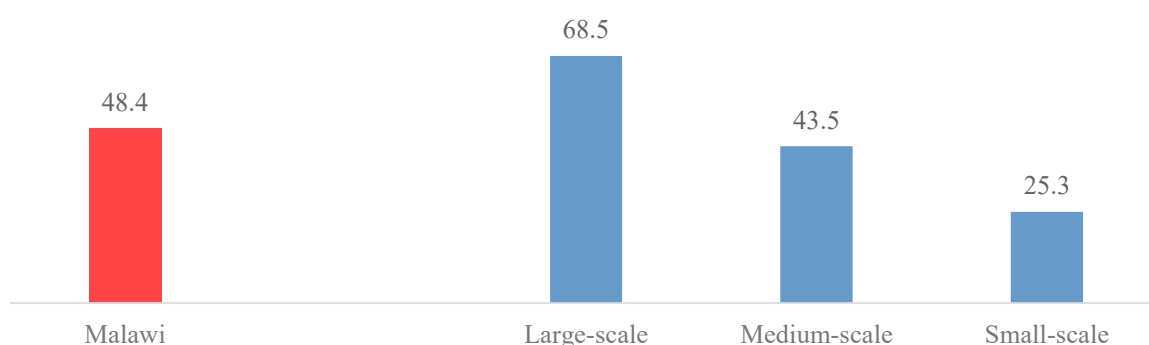


4.7 Use of Internet Banking

The results show that 48.4 percent of enterprises used internet banking in Malawi in 2019.

Analysis by the size of the enterprises shows that 68.5 percent of large enterprises used internet banking followed by 43.5 percent for medium scale and 25.3 percent small scale enterprises (Figure 4.9).

Figure 4.9: Proportion of Enterprise that Used Internet Banking Services by Size of Enterprises, Malawi 2019

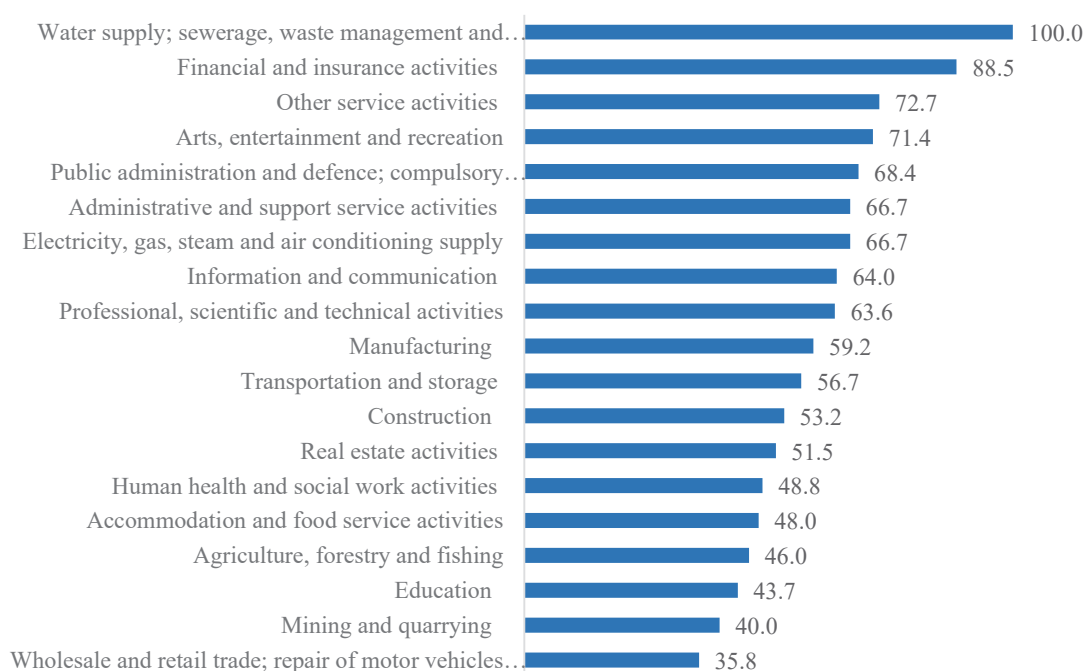


Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that all enterprises (100 percent) in Water, sewerage, waste management section used internet banking during the reference period followed by Financial and insurance section at 88.5 percent.

About 44 percent of enterprise in Education at section, 40.0 percent in Mining and quarrying section; and 35.8 percent in Wholesale and retail trade; repair of motor vehicles and motorcycles used internet banking (Figure 4.10).

Figure 4.10: Proportion of Enterprise that Used Internet Banking Services by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

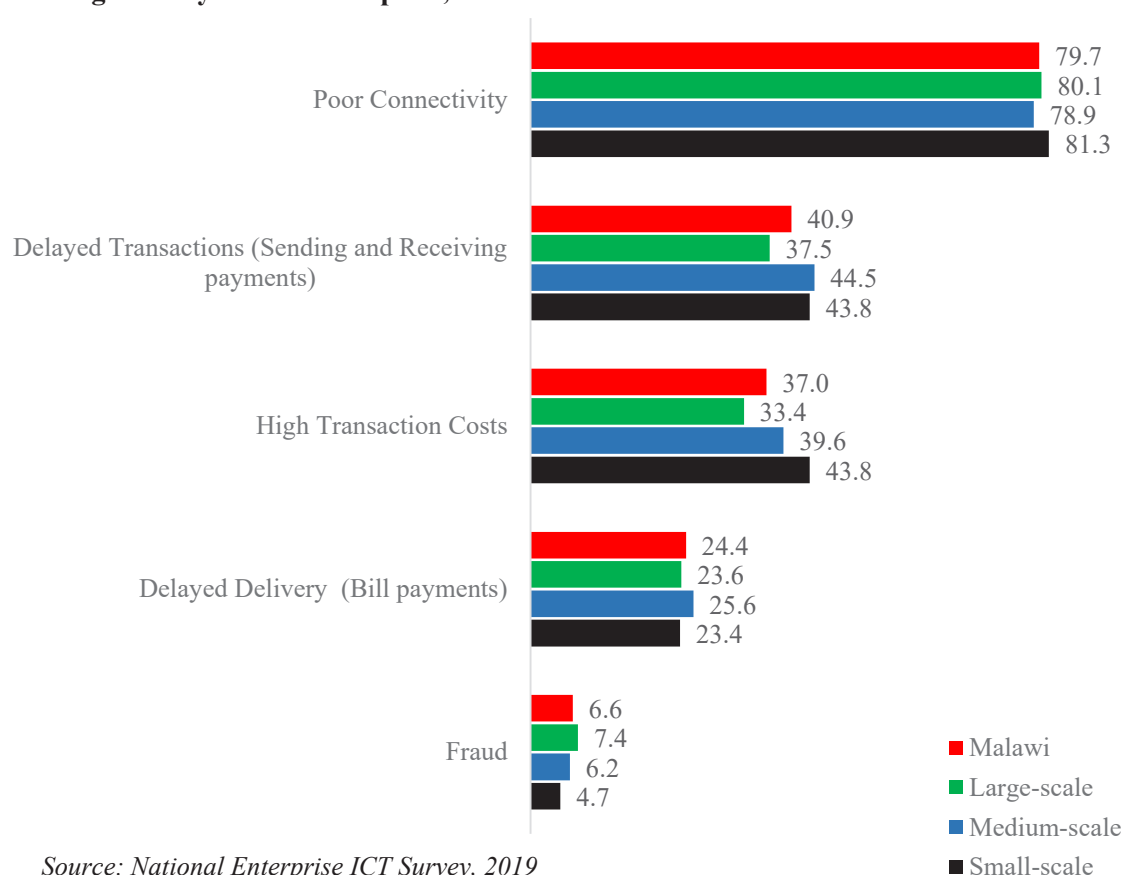
4.7.1 Challenges faced with internet banking

The survey further sought to establish the challenges faced by enterprises in using internet banking services.

The results show that poor internet connectivity was the most reported challenge by enterprises at 79.7 percent and lowest reported challenge was fraud at 6.6 percent. The other challenges reported by enterprises included delayed transactions at 40.9 percent, high transaction costs at 37.0 percent and delayed delivery for bill payments at 24.4 percent

Analysis by the size of enterprise shows that 81.3 percent of small scale enterprises reported that poor internet connectivity was their major challenge followed by large scale sector at 80.1 percent and medium scale sector at 78.9 percent (Figure 4.11).

Figure 4.11: Proportion of Enterprises that Faced Challenges with Internet Banking by Type of Challenge and by Size of Enterprise, Malawi 2019

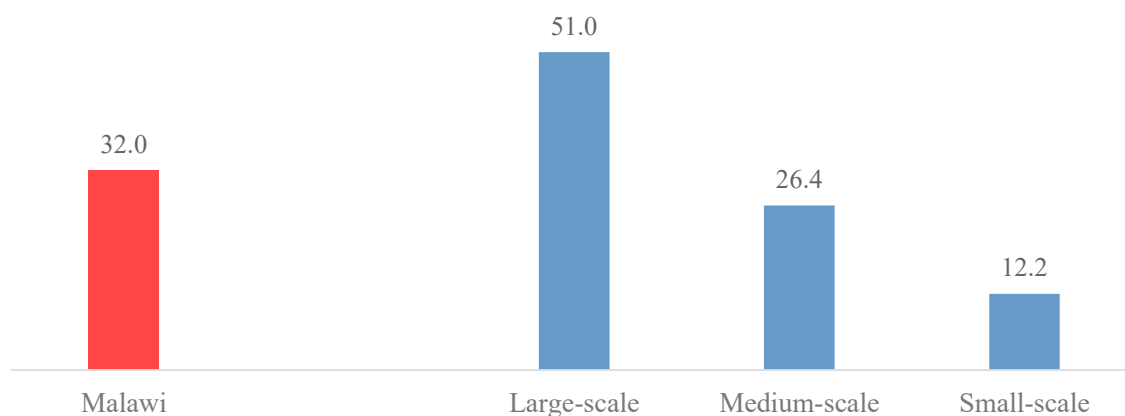


4.8 Enterprises Using Intranet

An intranet comprises a restricted computer network usually reserved for a single enterprise. An enterprise usually has its own physical infrastructure for intranet that is separate from the Internet.

Overall, 32.0 percent of the enterprises reported they used intranet in 2019. Analysis by the size of enterprises shows that 51.0 percent enterprises used intranet in the large scale enterprises followed by 26.4 percent in the medium scale enterprise and 12.2 percent in the small scale enterprises (Figure 4.12).

Figure 4.12: Proportion of Enterprises that Used Intranet by Size of the Enterprises, Malawi 2019



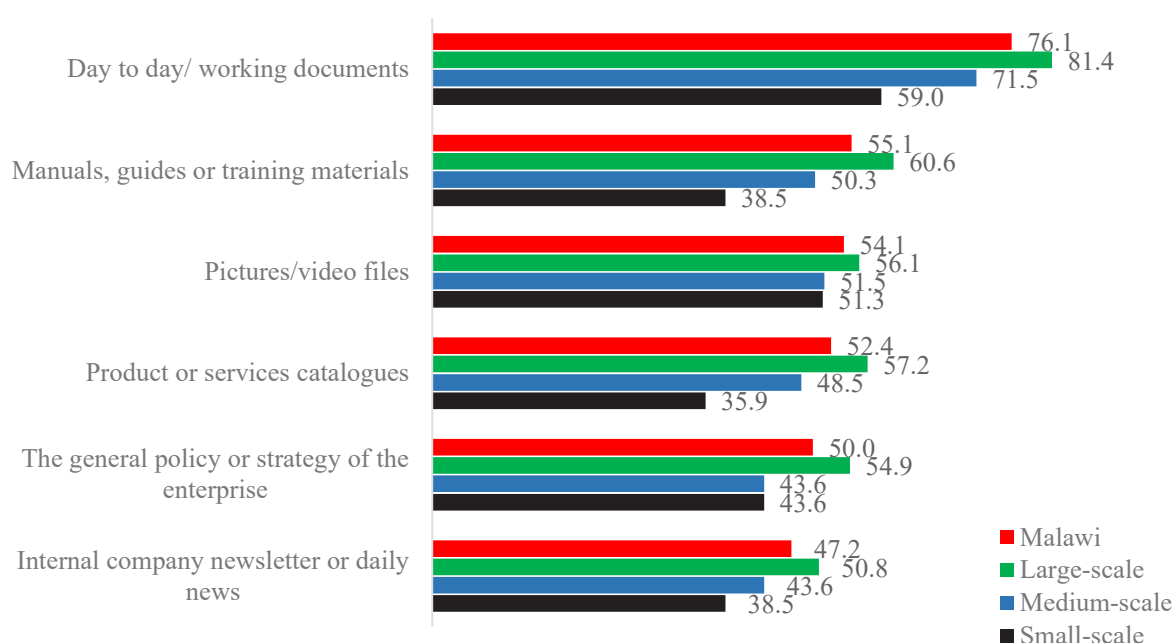
Source: National Enterprise ICT Survey, 2019

4.8.1 Enterprises that Used Intranet to Share Information

The results show that 76.1 percent of the enterprises used intranet to share their daily working documents, 55.1 percent for sharing manuals, guides or training materials, 54.1 percent for sharing pictures and video files and 52.4 percent for sharing product or service catalogues.

Analysis by the size of enterprises shows a large proportion (81.4 percent) of large scale enterprises used intranet followed by 71.5 percent for the medium scale enterprises and 59.0 percent for the small scale enterprises (Figure 4.13).

Figure 4.13: Proportion of Enterprises that Used Intranet to Share Information by Type of Information and by Size of Enterprises, Malawi 2019

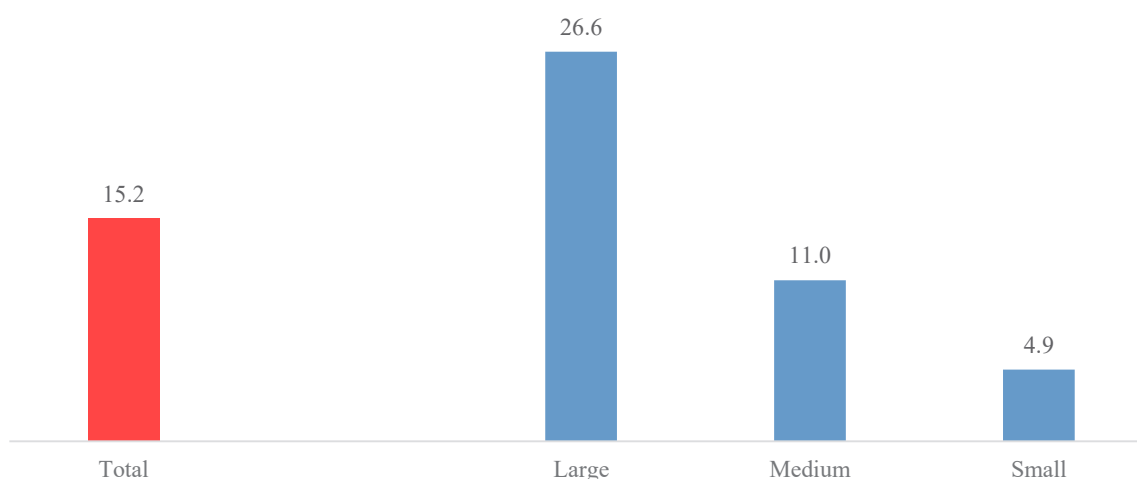


Source: National Enterprise ICT Survey, 2019

4.8.2 Use of Specialised Application

The results show that 15.2 percent of the enterprises used specialised applications for internal delivery of services. Analysis by the size of enterprise shows that 26.6 percent of large enterprises used specialized applications followed by medium enterprises 11.0 percent and small enterprises at 4.9 percent (Figure 4.14).

Figure 4.14: Proportion of Enterprises that Used Specialized Applications by Size of Enterprise, Malawi 2019

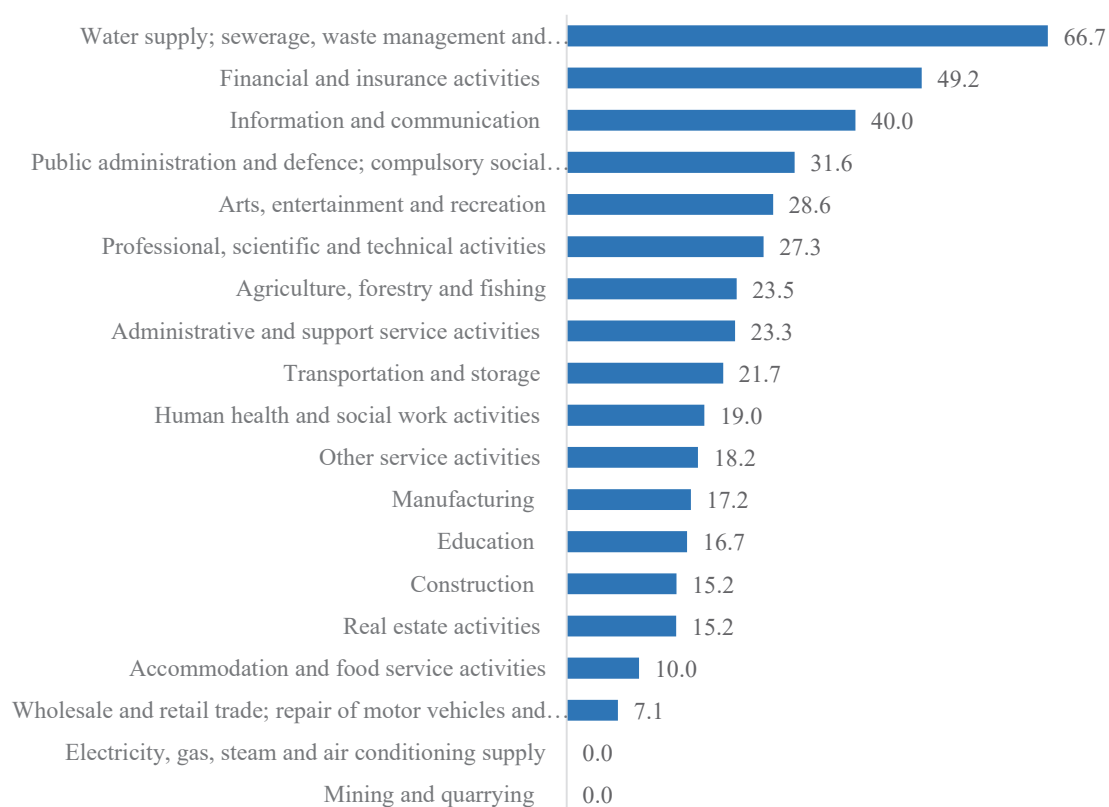


Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that Water supply, Sewerage, waste management and remediation activities section recorded the highest proportion (66.7 percent) of enterprises that used specialised application followed by the Financial and Insurance section at 49.2 percent and Information and Communication section at 40 percent.

Electricity, gas, steam and air conditioning supply and Mining and quarrying are the two sections that didn't report any usage of specialized applications (Figure 4.15).

Figure 4.15: Proportion of Enterprises that used Specialized Applications by Economic Activity, Malawi 2019



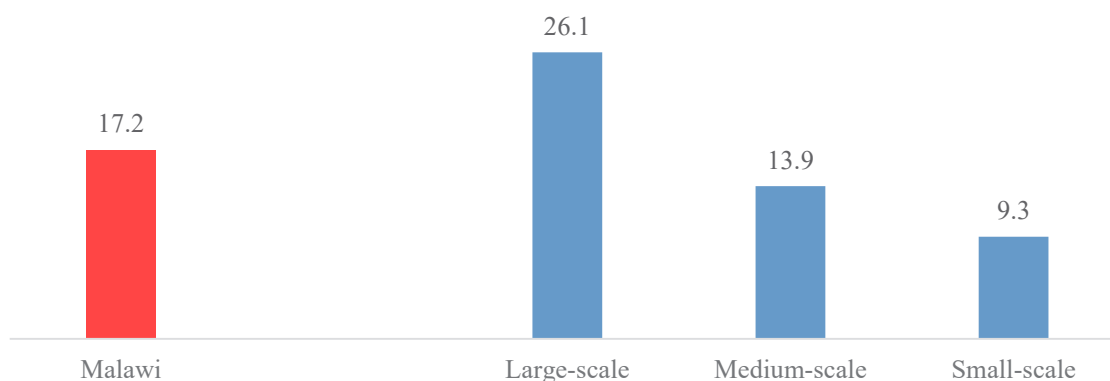
Source: National Enterprise ICT Survey, 2019

4.9 Enterprises Using Extranet

Extranet is a website that allows controlled access to partners, vendors and suppliers or an authorized set of customers. Extranet is run through virtual private networks allowing connection with businesses outside the enterprises' premises such as suppliers, vendors and customers. They also allow multiple firms to access network services provided by another firm such as data processing. The survey sought to establish usage of extranet by enterprises.

Overall, 17.2 percent of the enterprises had extranet in 2019. Analysis by the size of enterprise indicates that 26.1 percent of large scale enterprises, 13.9 percent of medium scale enterprises and 9.3 percent of small scale enterprises had extranet (Figure 4.16).

Figure 4.16: Proportion of Enterprises that Used Extranet by Size of Enterprises, Malawi 2019



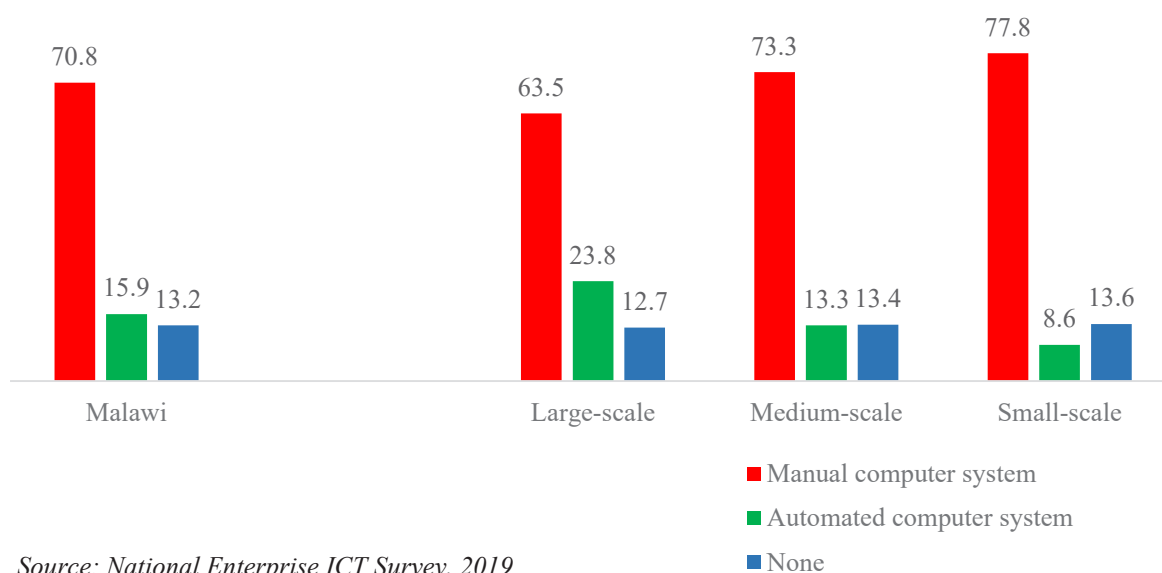
Source: National Enterprise ICT Survey, 2019

4.9.1 Systems Used for Placing/ Receiving Orders

Overall, 70.8 percent of enterprises used manual computer systems to place and receive orders, 15.9 percent used automated computer systems and 13.2 percent never used any systems for placing or receiving orders.

Small scale enterprises reported the highest proportion (77.8 percent) of enterprises that used manual computer systems in placing and receiving orders with the lowest being large scale enterprises at 63.5 percent. About 24 percent of large scale enterprises used automated systems for placing and receiving orders with the lowest being small scale enterprises at 8.6 percent (Figure 4.17).

Figure 4.17: Proportion of Enterprise that Used Extranet to Place/ Receive orders by Type of Extranet Service and by Size of Enterprises, Malawi 2019



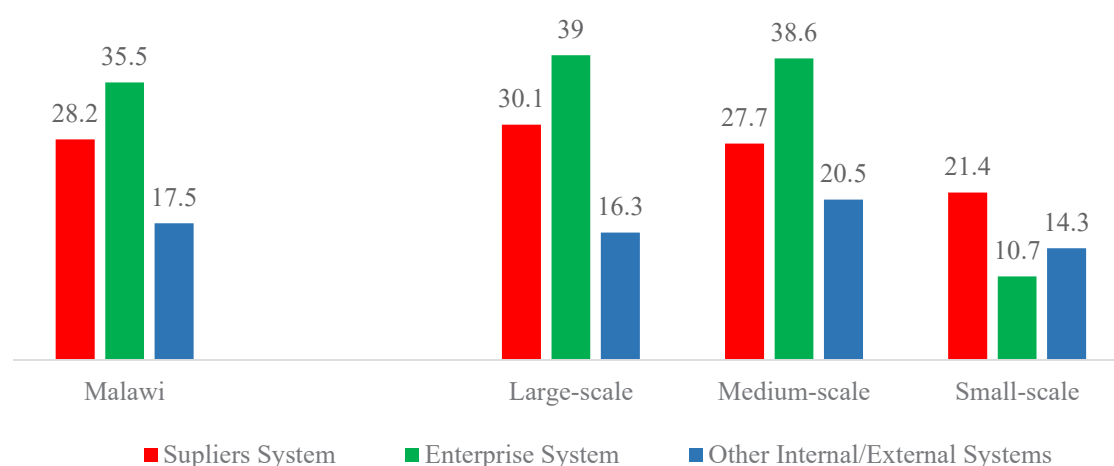
Source: National Enterprise ICT Survey, 2019

4.9.2 Enterprises that used Computer Systems to Place or Receive Orders by Type of Connection

The survey results show that 35.5 percent of enterprises reported that their computers for placing orders were automatically linked to their own computer systems, 28.2 percent were automatically linked to their suppliers' computer systems and 17.5 percent were automatically linked to other internal or external systems.

Analysis by size of the enterprises shows that 30.1 percent of the large scale enterprises reported that their computers for placing orders were automatically linked to their suppliers computer systems followed by 27.7 percent for the medium scale and 21.4 percent for the small scale enterprises. The results further show that 39.0 percent of the large scale enterprises that their computers for placing orders were automatically linked to their own computer system followed by 38.6 percent of the medium scale enterprises and 10.7 percent of the small scale enterprises. (Figure 4.18).

Figure 4.18: Proportion of Enterprises that Used Computer Systems to Place Orders by Type of Connection and Size of Enterprise, Malawi 2019



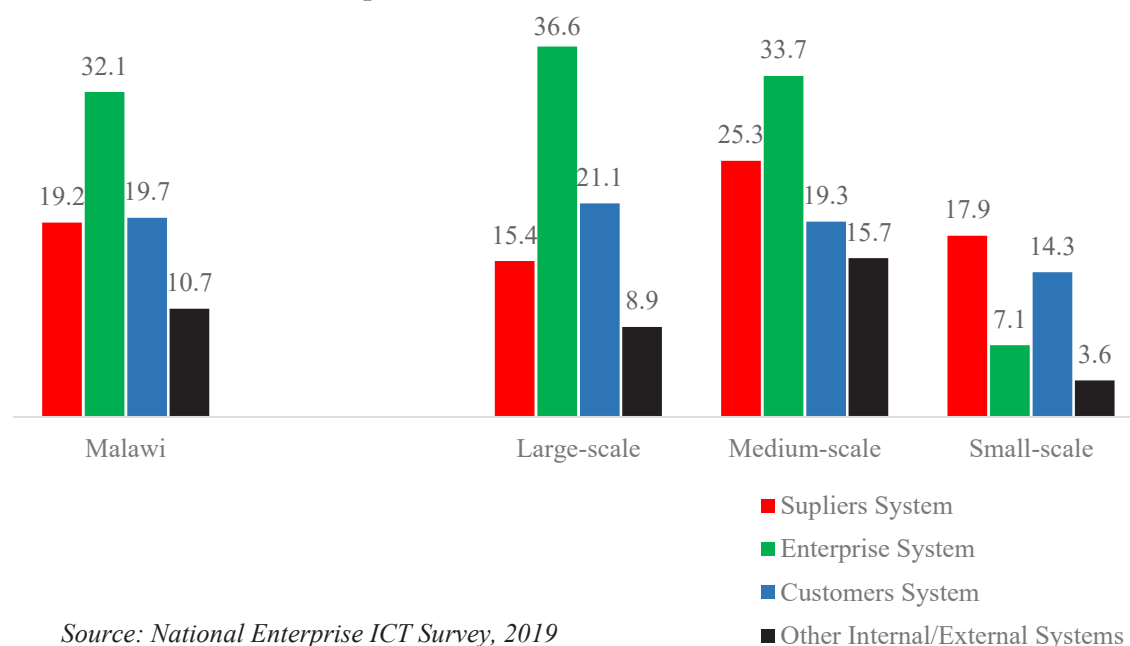
Source: National Enterprise ICT Survey, 2019

The results indicate that 32.1 percent of the enterprises reported that their computers for receiving orders were automatically linked to their enterprise's systems, 19.2 percent were automatically linked to their supplier's computer systems and 19.7 percent of the enterprises were automatically linked to their customers' computer systems.

About 11 percent of enterprises reported that their computers for receiving orders were automatically linked to other internal/external systems which automatically linked with the enterprise's computer systems.

Analysis by size of enterprise shows that 36.6 percent of the large scale enterprises reported that their computers for receiving orders were automatically linked to their own system followed by 33.7 percent for the medium scale enterprises and 7.1 percent for the small enterprises (Figure 4.19).

Figure 4.19: Proportion of Enterprises that Used Computer Systems to Receive Orders by Type Connection and Size of Enterprise, Malawi 2019



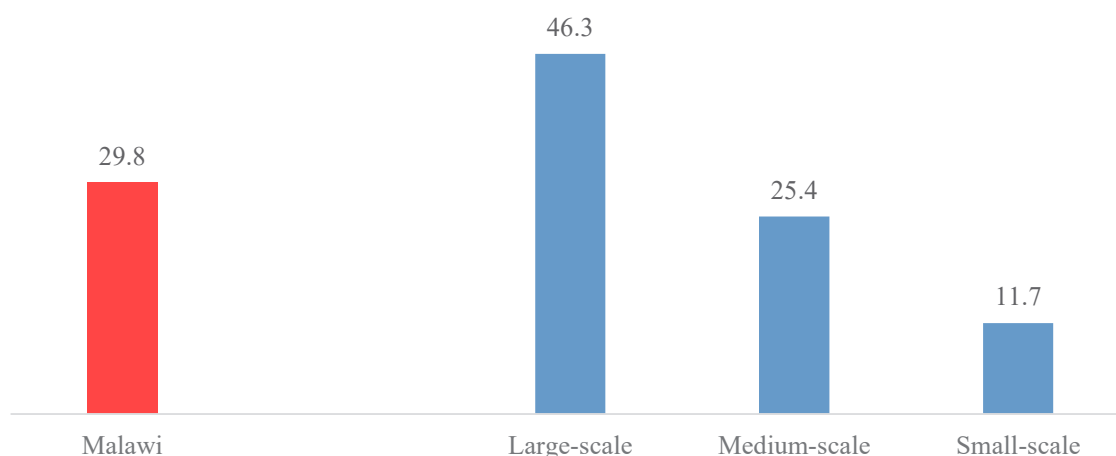
4.10 Use of Website

A website is a collection of publicly accessible, interlinked web pages that share a single domain name. They can be created and maintained by an individual, group, business or organization to serve a variety of purposes. In this digital era individuals and organizations often access products/services as well as review same online. In this regard, enterprises often seek to have an online presence for marketing purposes, be more accessible to customers as well as to encourage customer feedback. This section presents findings on the level of online presence of enterprises and assesses use of online tools like website, email and social media.

4.10.1 Enterprises with an Active Website

In total 29.8 percent of the enterprises reported they had an active website. Analysis by size of the enterprise shows that large scale enterprises reported the highest proportion (46.3 percent) of enterprise with active websites followed by 25.4 percent of the medium scale sector and 11.7 percent of the small scale enterprises (Figure 4.20).

Figure 4.20: Proportion of Enterprise with an Active Website by Size of Enterprise, Malawi 2019

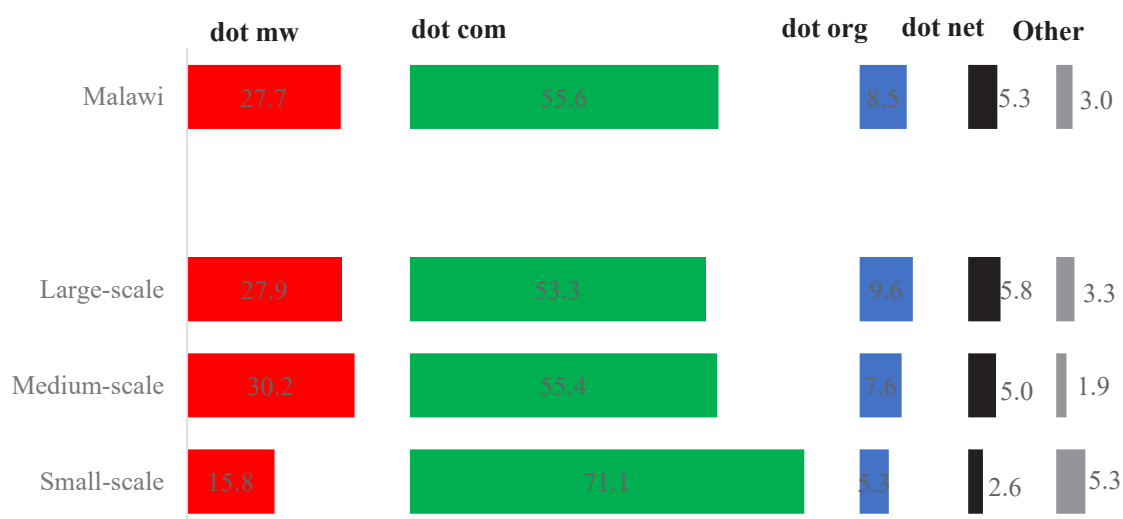


Source: National Enterprise ICT Survey, 2019

4.10.2 Enterprise Web Domain's Used

Overall, 55.6 percent of enterprises used the *dot com* web domain for their websites followed by 27.7 percent for *dot mw*, 8.5 percent for *dot org* and 5.3 percent for *dot net* domain (Figure 4.21).

Figure 4.21 Proportion of Enterprises' Use of Website by Type of Web domain and Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

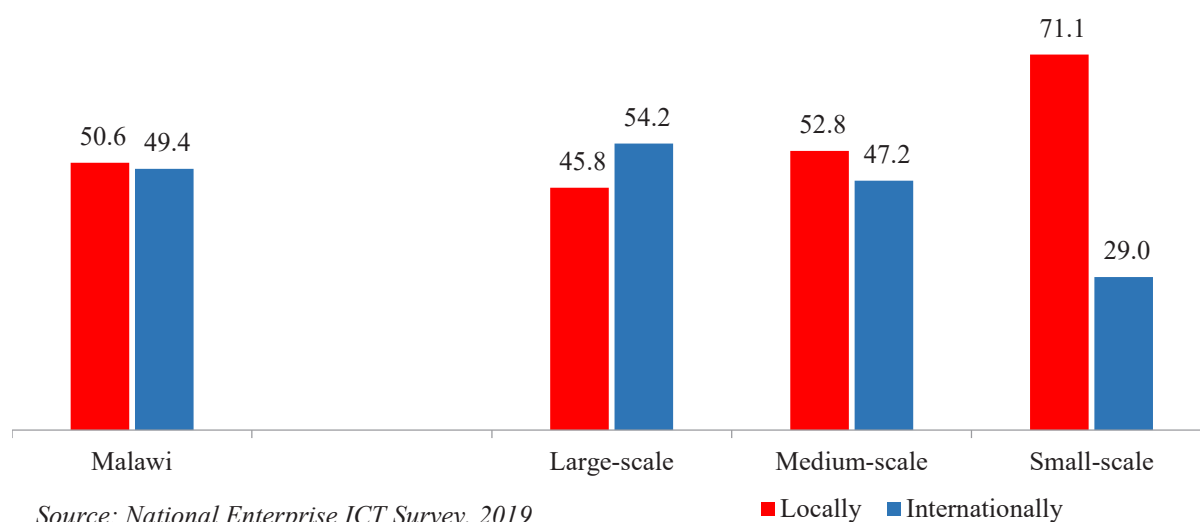
4.10.3 Web Hosting

Once a website is created, all the files and information contained on the website need to be stored somewhere on physical servers where potential internet visitors would be viewing your business information and be able to purchase your products and services.

Overall, 50.6 percent of enterprises hosted their websites locally while 49.4 enterprises reported to host their websites internationally.

Small scale enterprises had the highest proportion (71.1 percent) of enterprises hosting websites locally followed by medium scale enterprises at 52.8 percent and large scale enterprises at 45.8 percent. Alternatively, large scale enterprises had the highest proportion (54.2 percent) of the enterprises hosting websites internationally followed by medium scale enterprises at 47.2 percent and small scale enterprises at 29.0 percent (Figure 4.22).

Figure 4.22: Proportion of Enterprise with an Active Website by Location for Hosting the Website and Size of Enterprise, Malawi 2019

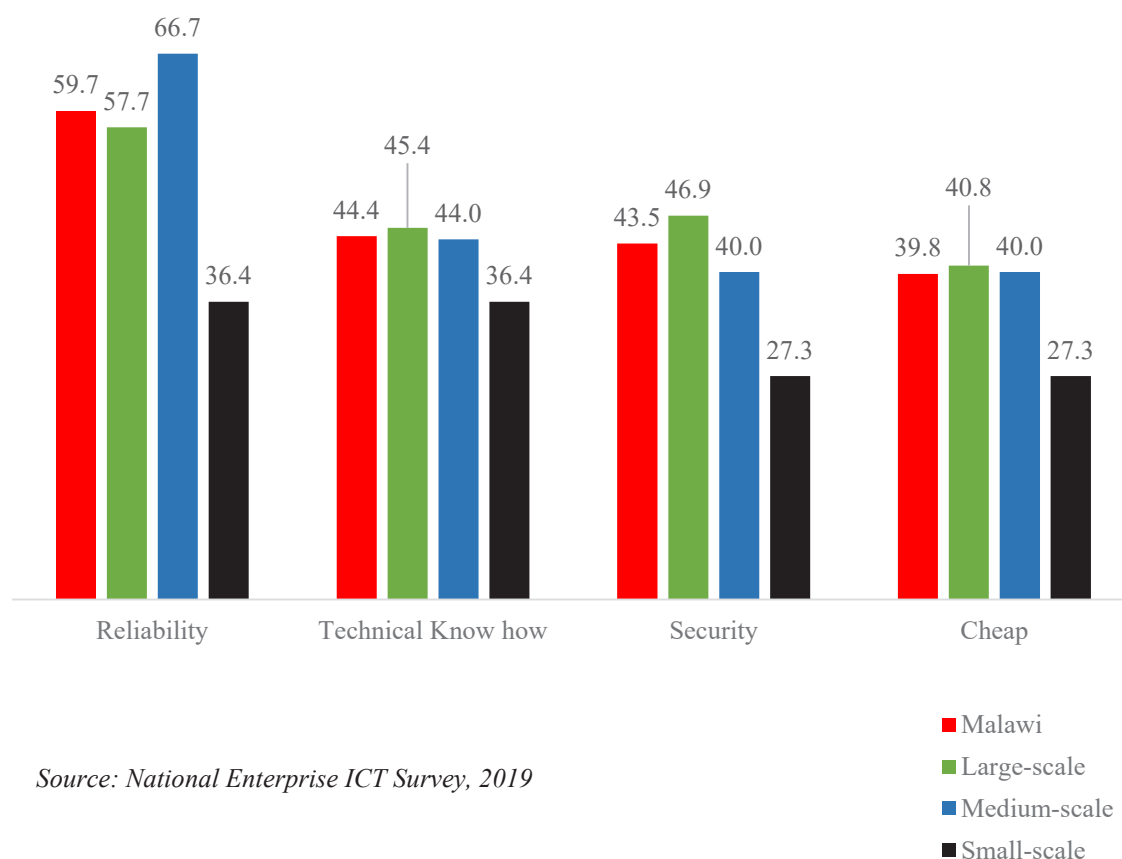


The survey further sought to establish the reasons for enterprises hosting websites internationally. This is because the choice of location for hosting an enterprise's website is usually informed by several factors which include affordability, reliability of the service, security of information and enterprise policies.

About 60 percent of the enterprises cited reliability of service as the reason for hosting websites internationally, 44.4 percent cited availability of technical expertise and 43.5 percent cited security of information. Cost of the service was the least cited reason at 39.8 percent.

Analysis by size of the enterprise shows that 66.7 percent of medium scale enterprises reported reliability as the reason for opting to host websites internationally followed by 57.7 percent for large scale enterprises and 36.4 percent for small scale enterprises (Figure 4.23).

Figure 4.23: Proportion of Enterprises that Hosted their Websites Internationally by Reason and Size of the Enterprise – 2019

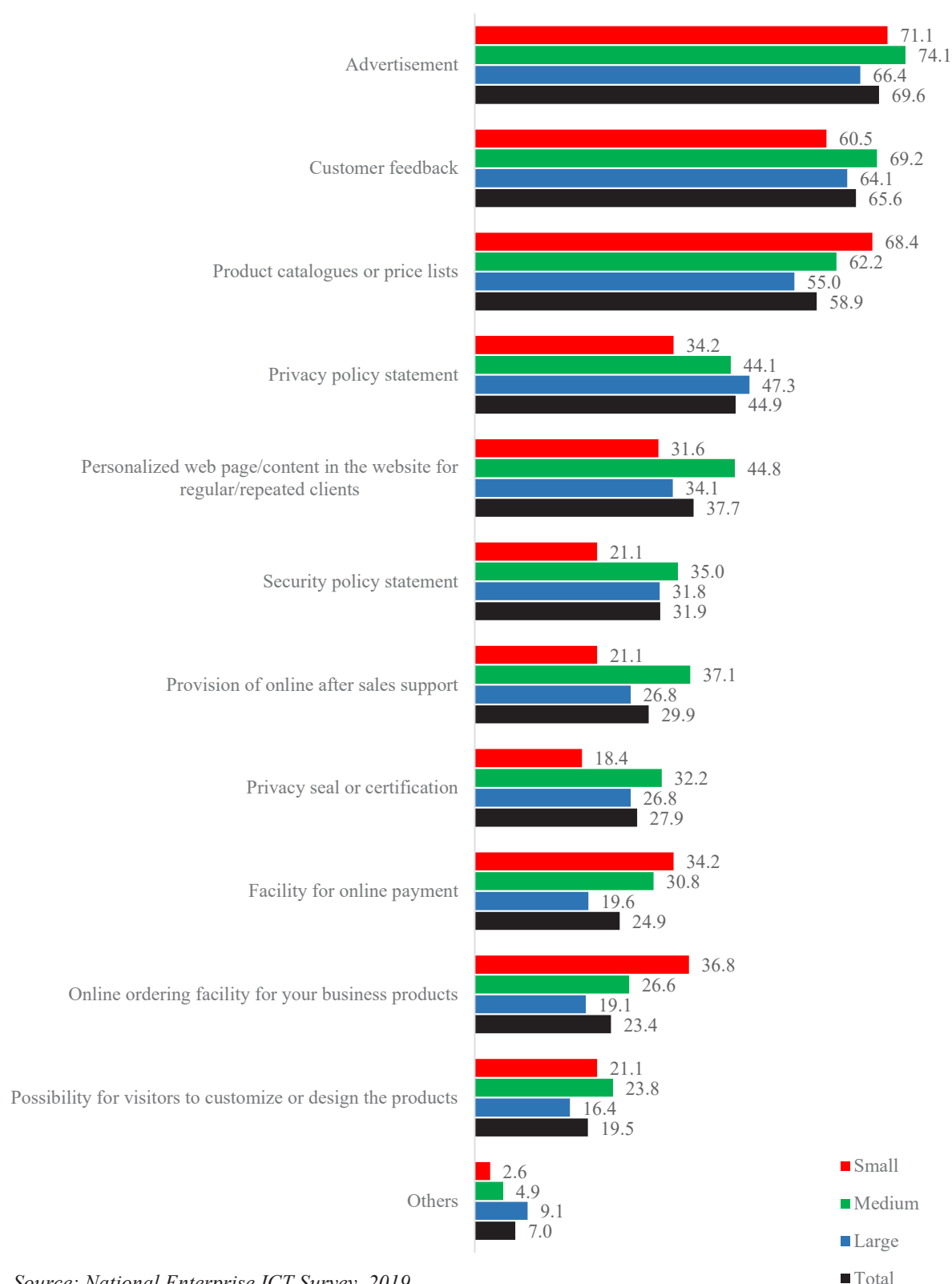


4.10.4 Type of Website Features

Overall, the highest proportion (69.6 percent) of features on the websites was for advertisement followed by customer feedback at 65.6 percent and product catalogue at 58.9 percent.

Analysis by size of enterprise shows that 74.1 percent of medium scale enterprises had advertisement feature on their websites followed by 71.1 percent for small scale enterprises and 66.4 percent for large scale enterprises, respectively (Figure 4.24).

Figure 4.24: Proportion of Enterprises that used Website Features by Enterprise Size, Malawi 2019



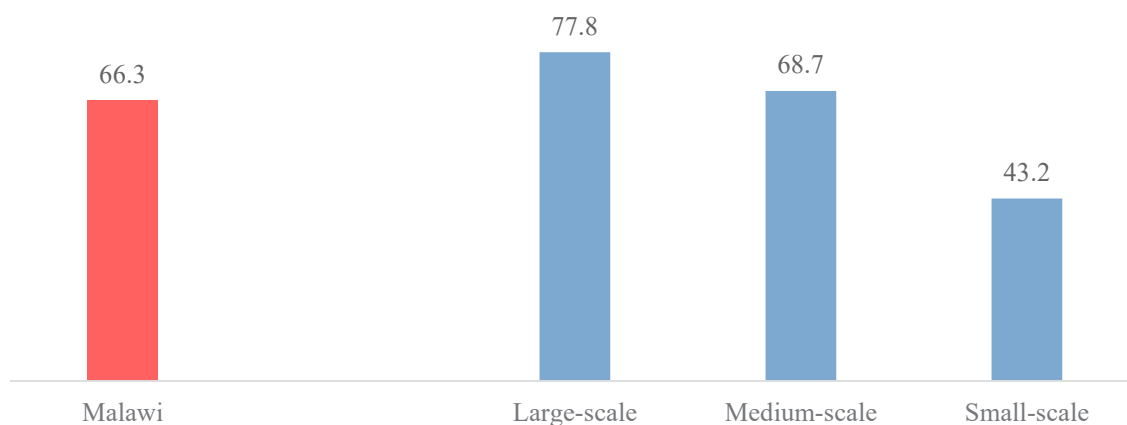
Source: National Enterprise ICT Survey, 2019

4.10.5 Use of Business E-mail Address

The survey aimed at establishing the proportion of enterprises that had email address for business use.

The results show that 66.3 percent of enterprises had business email addresses. The highest proportion (77.8 percent) of enterprises with business emails was for large scale enterprises followed by 68.7 percent for medium scale enterprises and 43.2 percent for small scale enterprises (Figure 4.25).

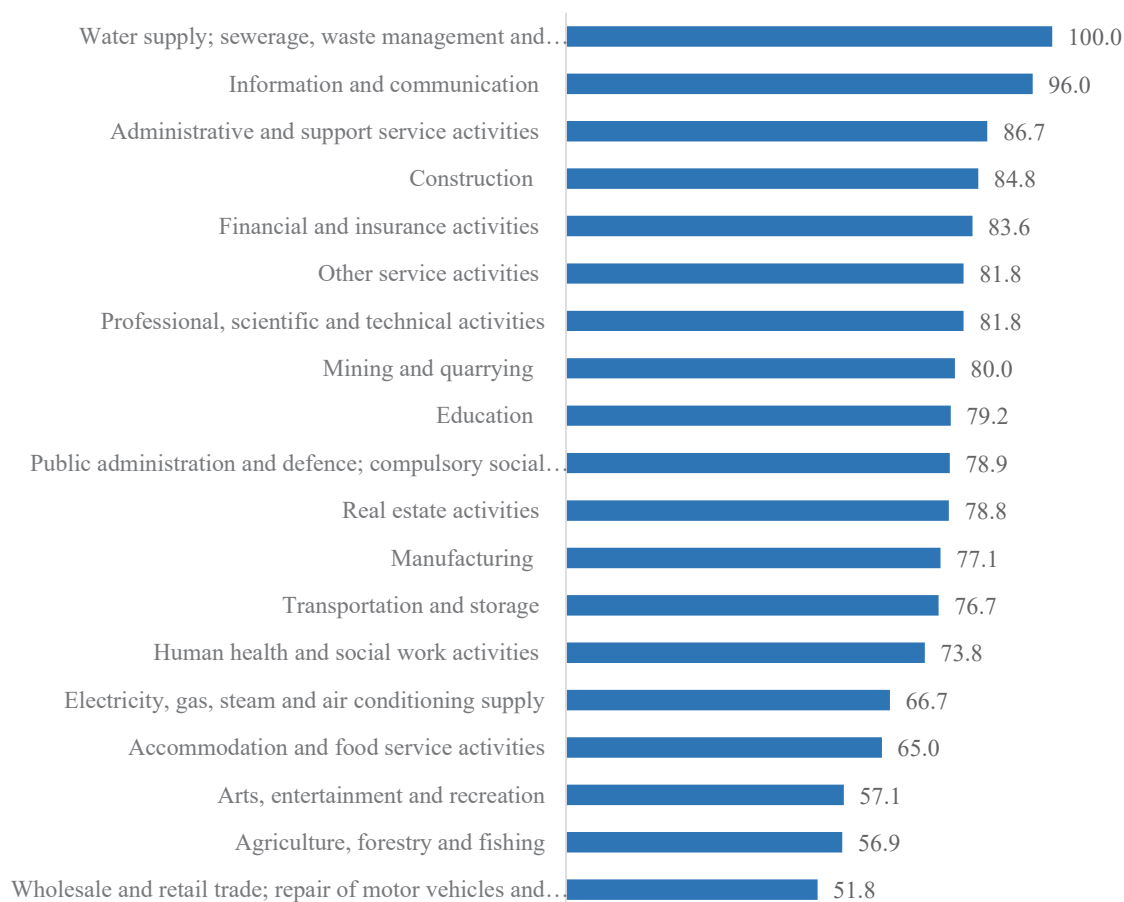
Figure 4.25: Proportion of Enterprises that had a Business E-mail Address by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activities shows that all enterprises (100 percent) in the Water supply, sewerage, waste management and remedial activities section had e-mail addresses for official use followed by enterprises in the Information and communication section at 96 percent. Wholesale and retail trade reported the lowest proportion of enterprises with e-mail addresses for official use at 51.8 percent (Figure 4.26)

Figure 4.26: Proportion of Enterprises that had a Business E-mail Address by Economic Activity, Malawi 2019



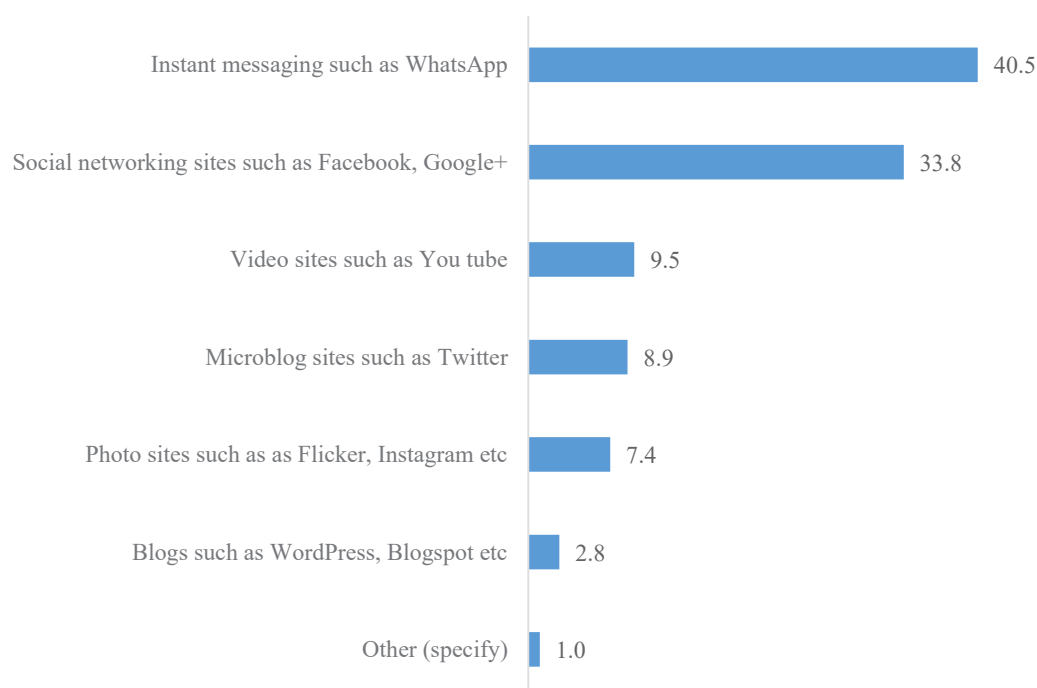
Source: National Enterprise ICT Survey, 2019

4.10.6 Use of Social Networking Websites

Online Social media plays an important role in business in increasing visibility of business brands and also interaction with customers. With an ever increasing number of people using online media platforms like facebook, whatsapp etc, there cannot be a better way of marketing your products than via these platforms. The survey wanted to find out if enterprises used these platforms for business purposes.

About 41 percent of enterprises used whatsapp for instant messaging as a means of interacting with their customers, 33.8 percent used Facebook and Google; while 9.5 percent used video sites like YouTube (Figure 4.27)

Figure 4.27: Proportion of Enterprises that Used Social Networking Websites by Type of Usage, Malawi 2019



Source: National Enterprise ICT Survey, 2019

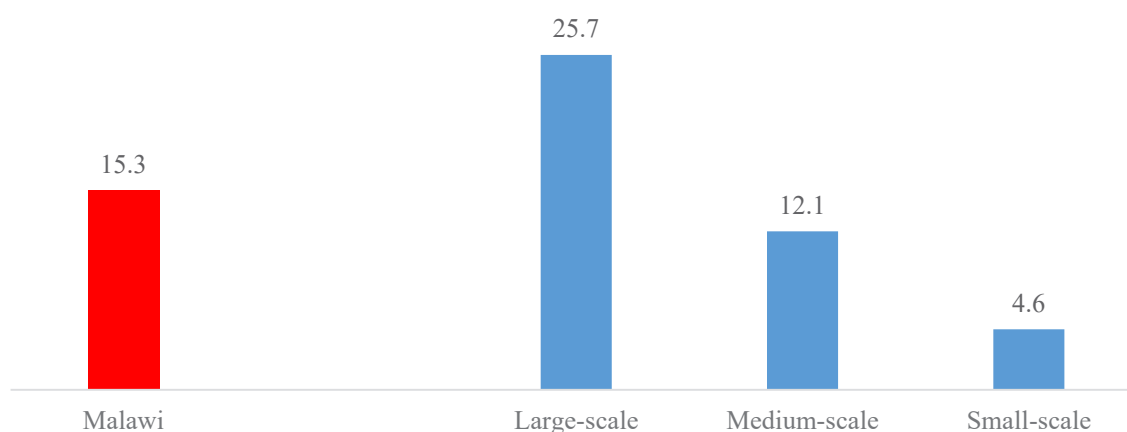
4.11 Use of Cloud Computing

Cloud computing is an IT development, deployment and delivery model, enabling service users to have ubiquitous, convenient and on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort or service-provider interaction (source). This comes with a number of advantages for the users such as cost saving, high internet speed, data backup and restoration and quick deployment. The survey sought to capture a number of areas under the use of cloud computing among enterprises.

4.11.1 Enterprises using Cloud computing

The results show that 15.3 percent of the enterprises used cloud computing. Large scale enterprises had the highest cloud computing use at 25.7 percent followed by medium scale enterprises at 12.1 percent and small enterprises at 4.6 percent (Figure 4.28).

Figure 4.29: Proportion of Enterprises that Used Cloud Computing by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that the highest proportion (66.7 percent) of the enterprise in Water supply, sewerage, waste management and remedial activities section used cloud computing services followed Financial and insurance section at 55.7 percent. The section recording the lowest proportion of enterprises was Electricity, gas, steam and air conditioning where almost all enterprise (0.0 percent) reported that they did not use cloud computing services in 2019 (Figure 4.29).

Figure 4.29 Proportion of Enterprises using Cloud Computing by Economic Activity, Malawi 2019



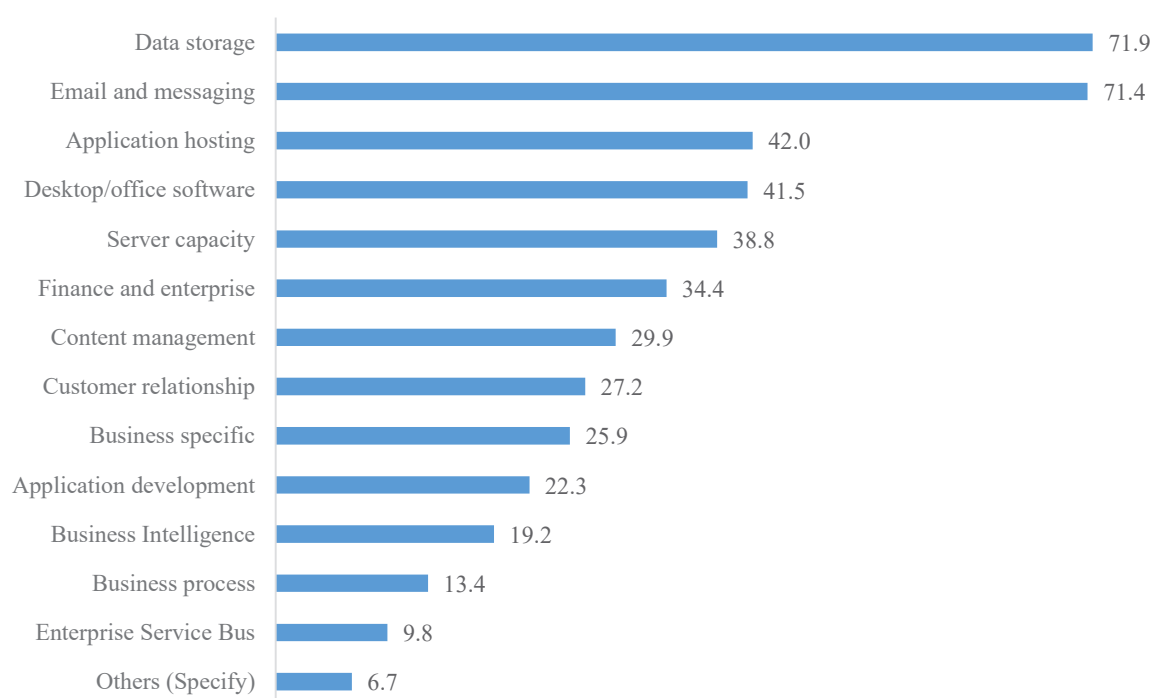
Source: National Enterprise ICT Survey, 2019

4.11.2 Cloud Computing Services used

There are several services of cloud computing that businesses can use. The survey tried to establish what services were mostly used by enterprises for business purposes.

Majority (71.9 percent) of the enterprises used cloud computing for data storage, 71.4 percent used the service for email and messaging and 42.0 percent used services for application hosting (Figure 4.30).

Figure 4.30: Proportion of Enterprises that used Cloud Computing by Type of Service, Malawi 2019

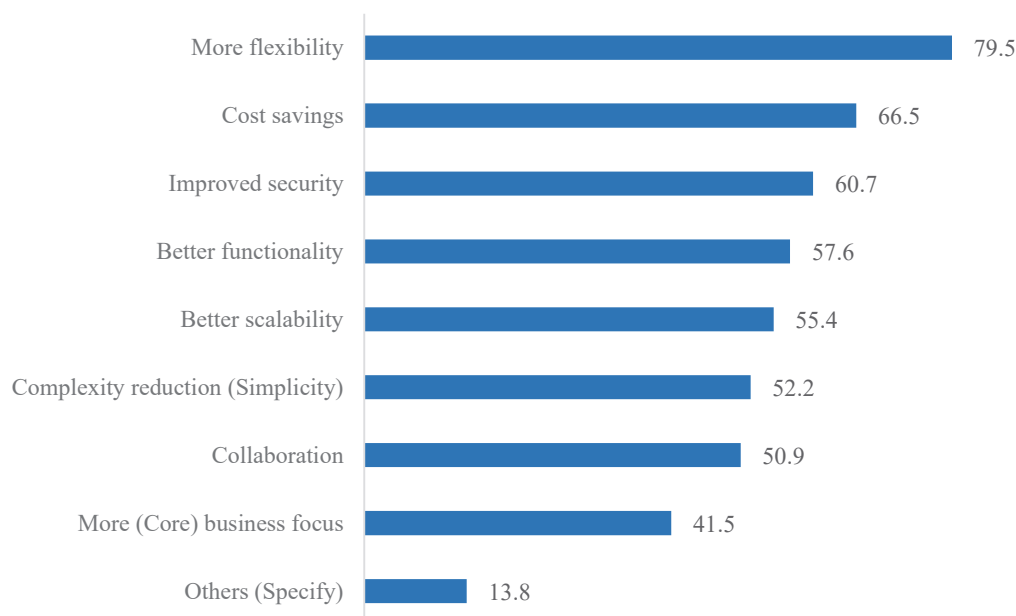


Source: National Enterprise ICT Survey, 2019

4.11.3 Benefits of Using Cloud Computing Services

The highest proportion (79.5 percent) of enterprises that used cloud computing services benefitted because of the flexibility of service followed by cost saving at 66.5 percent and the least identified benefit from cloud computing was the need to focus more on core business at 41.5 percent (Figure 4.31).

Figure 4.32: Proportion of Enterprises' Use of Cloud Computing by Type of Benefit, Malawi 2019

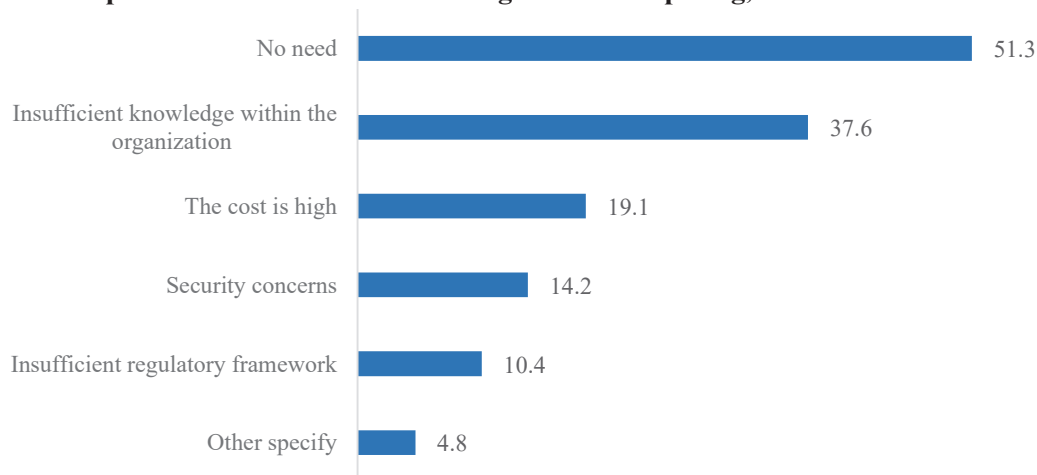


Source: National Enterprise ICT Survey, 2019

4.11.4 Reasons for Not Using Cloud Computing

About 51 percent of the enterprises cited that there was no need for the enterprises to use cloud computing services followed 37.6 percent that reported lack of knowledge within enterprises. The least cited reason was inadequacy of regulatory framework within enterprises at 10.4 percent (Figure 4.32).

Figure 4.32: Proportion of Reasons for not Using Cloud Computing, Malawi 2019



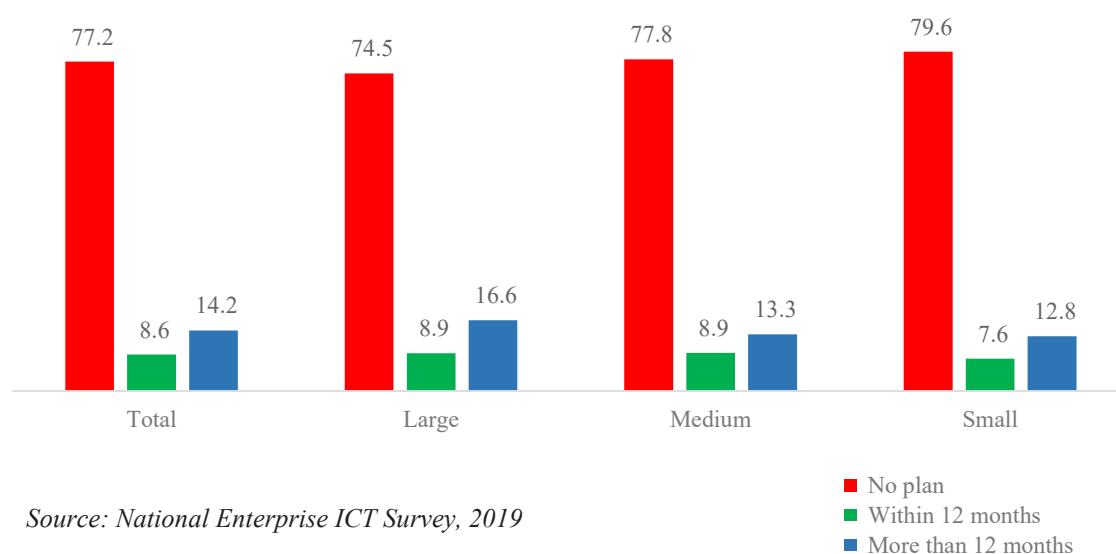
Source: National Enterprise ICT Survey, 2019

4.11.5 Plan to Adopt Cloud Computing in Future

The survey sought to establish if at all enterprises that did not use cloud computing services planned to adopt some in the near future.

The results show that 77.2 percent of the enterprises had no plans to use cloud computing services while 8.6 percent indicated that they plan to adopt the services within 12 months. Analysis by enterprise size also shows that 79.6 percent of the small scale, 77.8 percent of the medium scale enterprises and 74.5 percent of the small scale enterprises had no plans to adopt cloud computing services. On the other hand, 8.9 percent for both large and medium and 7.6 percent of small enterprises had plans to adopt cloud computing services within 12 months (Figure 4.33).

Figure 4.33: Proportion of Enterprises' Future Adoption of Cloud Computing by Size of Enterprises, Malawi 2019



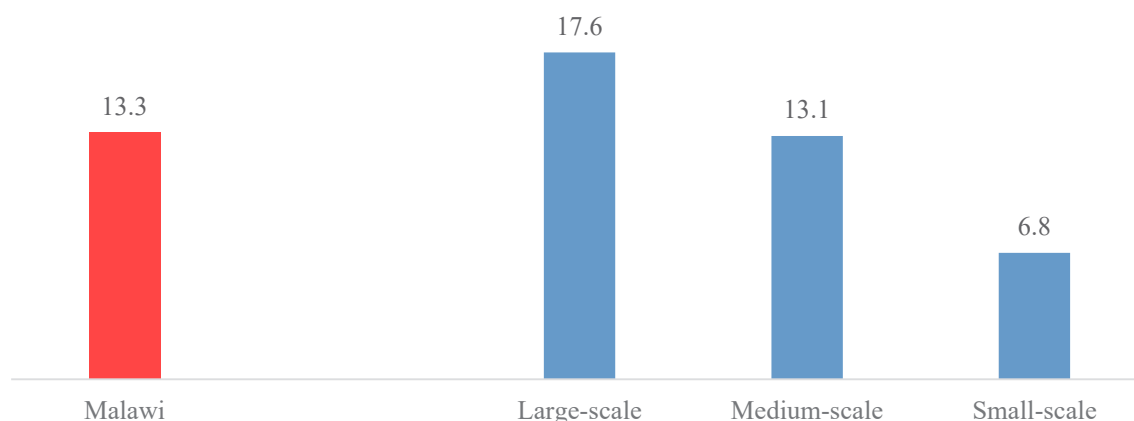
4.12 Use of Internet of Things (IoT)

Internet of Things (IoT) is a system of interrelated computing devices, mechanical and digital machines, objects, animal or people that are provided with unique identifiers and the ability to transfer data over a network without requiring human interaction. This section presents findings on the use of IoT among enterprises.

4.12.1 Enterprises that used any IoT products

Overall, 13.3 percent of the enterprises used IoT devices in 2019. Analysis by enterprise size of the enterprises shows that 17.6 percent of the large scale enterprises, 13.1 percent of the medium scale enterprises and 6.8 of the small scale enterprises used IoT devices in 2019 (Figure 4.34).

Figure 4.34: Proportion of Enterprises Using IoT Devices by Size of Enterprises, Malawi 2019



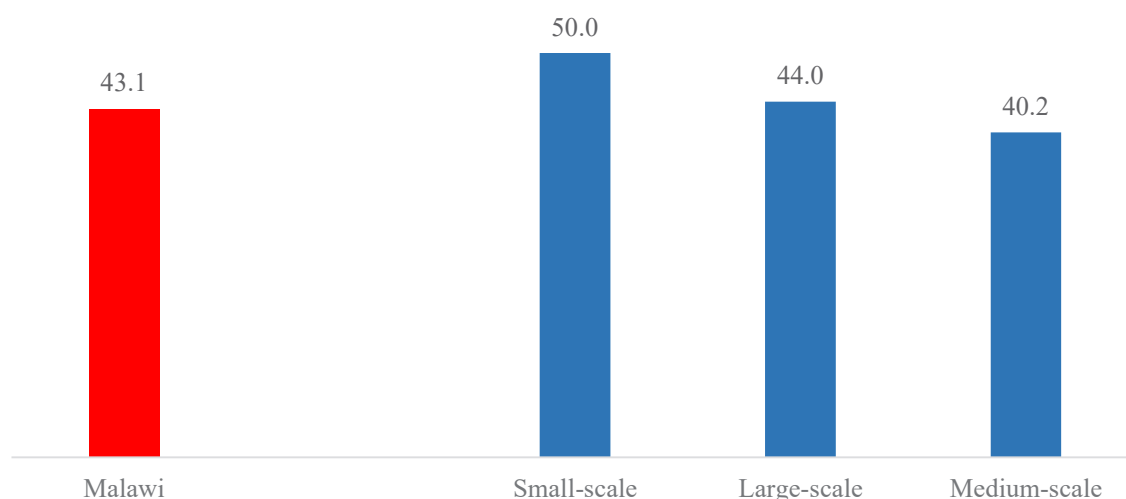
Source: National Enterprise ICT Survey, 2019

4.12.2 Use of Application to manage IoT Devices

Application: An application, or application program, is a software program that runs on your computer. Web browsers, e-mail programs, word processors, games, and utilities are all applications. The word "application" is used because each program has a specific application for the user.

Overall, 43.1 percent of enterprises that used IoT devices used an application to manage their devices. Analysis by enterprise size shows that small enterprises had the highest proportion of IoT devices managed using an app at 50.0 percent followed by large enterprises at 44.0 percent and medium enterprises at 40.2 percent (Figure 4.35).

Figure 4.35: Proportion of Enterprises that used an Application to manage IoT Devices by Size of Enterprise, Malawi 2019

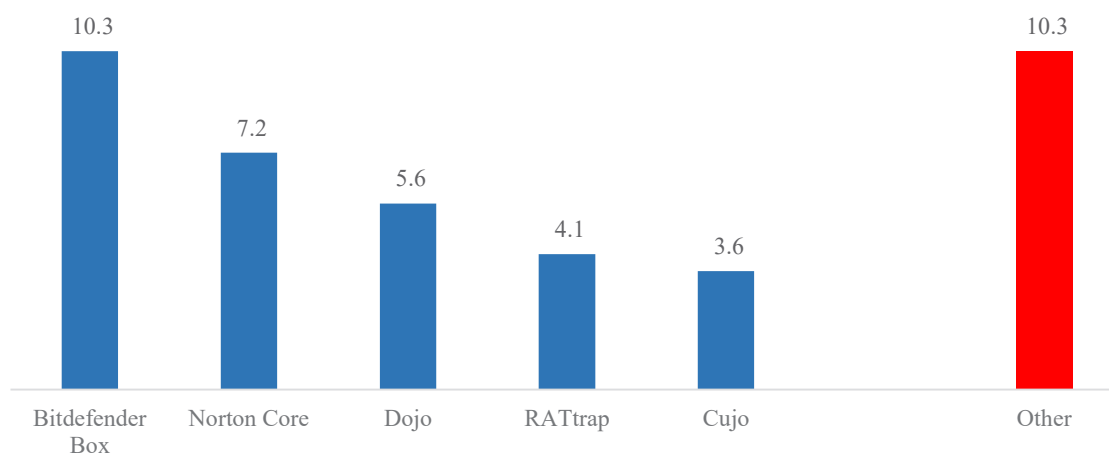


Source: National Enterprise ICT Survey, 2019

4.12.3 Type of Security Products Used to Protect IoT Devices

Lastly, the survey sought to establish the security products used by enterprises to protect IoT devices. The results show that there were different types of security products used with Bitdefender box registering the highest proportion at 10.3 percent followed by Norton core at 7.2 percent and Dojo at 5.6 percent (Figure 4.36).

Figure 4.36: Proportion of Enterprises that used Security Products for IoT Devices by Type of Security, Malawi 2019



Source: National Enterprise ICT Survey, 2019

The evolving of the e-commerce transactions in trade related statistics is crucial to assess the development of the economy. Demand for e-commerce statistics is critical in assessing the development of trade in the country and comparison with the rest of the world.

Electronic commerce (e-commerce) is the process or facilitation of buying and selling of products/goods and services or transmitting of funds or data over an electronic network such as Internet or online or mobile application. Mainly e-commerce refers online retail and online shopping as well as electronic transactions which is replacing the tradition physical trading over the past decade.

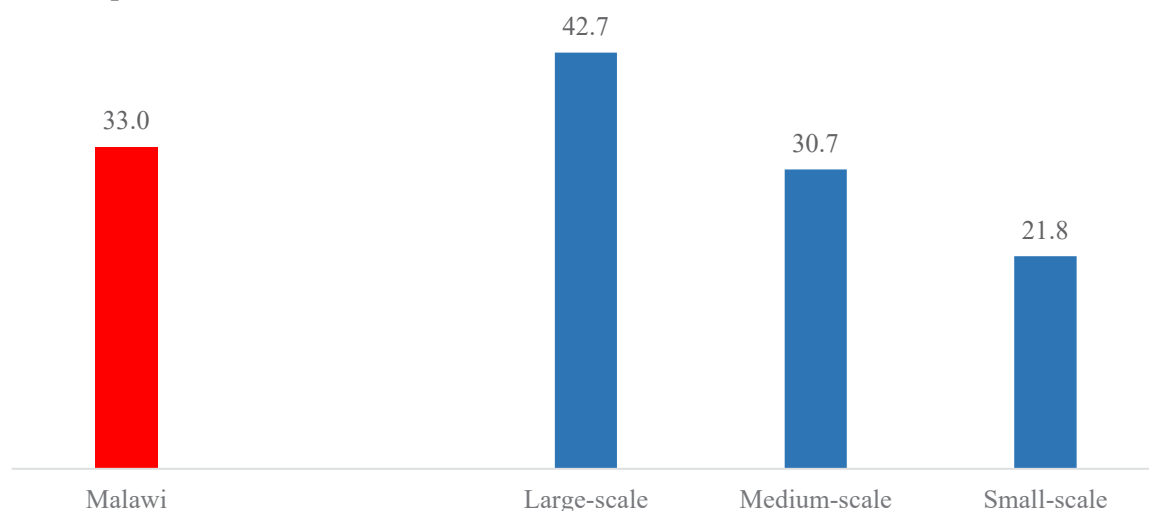
This chapter provides the survey output on the level of e-commerce in Malawi by assessing the awareness of enterprises on the recently enacted Electronic Transactions Act, the types of e-commerce activities, buying and selling using online platforms and through email.

5.1 Electronic Transactions Act

Government of Malawi enacted the Electronic Transactions and Cyber Security Act also referred to as the Electronic Transactions Act in 2016 to make provision for electronic transactions including digital financial services, the establishment and functions of the Malawi Computer Emergency Response Team (Mw-CERT) and to criminalize offences related to computer systems and ICTs. The Act further regulates various facets of electronic commerce such as consumer protection, online advertising of electronic commerce operations and the interface between electronic transactions on one hand and financial and banking sector on the other hand. The Act further recognizes the roles of the communications regulator as providing the electronic communications platform for online transactions and the central bank's role as the regulator of financial services such as electronic money services in the country. This section highlights the proportion of enterprises who were aware of the Electronic Transactions Act and use of various services under the Act.

The results show that 33.0 percent of the enterprises were aware of the Electronic Transactions Act. Among the enterprises that were aware of the Act, 42.7 percent were from large scale enterprises, 30.7 percent from medium scale enterprises and 21.4 percent from small scale enterprises (Figure 5.1).

Figure 5.1: Proportion of enterprises' awareness of the Electronic Transactions Act by Size of the Enterprise, Malawi 2019



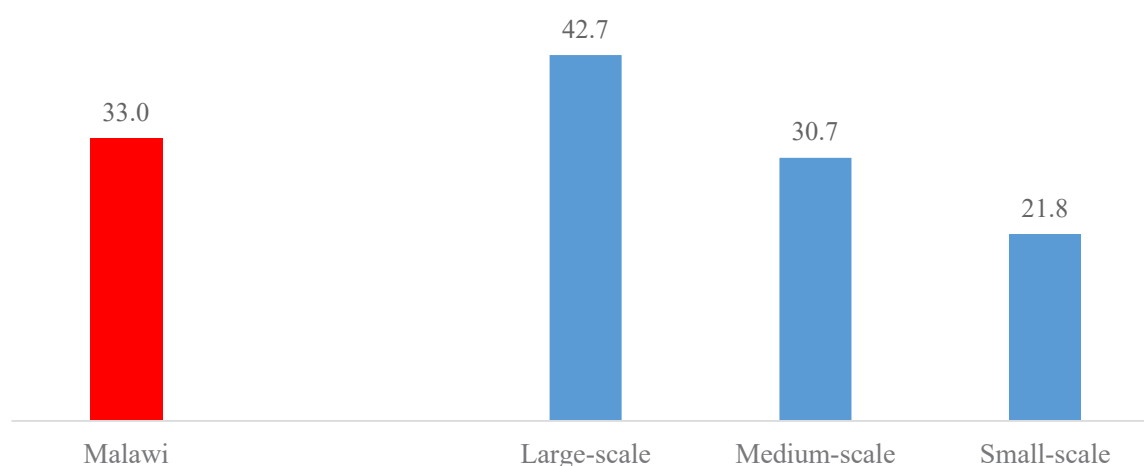
Source: National Enterprise ICT Survey, 2019

5.2 Uptake of e-Commerce

This section provides findings on e-commerce carried out by enterprises through automated systems for both buying and selling goods and services.

The results show that 33.0 percent of the enterprises engaged in e-commerce activities. Analysis on the uptake of e-commerce by enterprise size show that large scale enterprises had the largest proportion of e-commerce uptake at 42.7 percent followed by medium scale enterprises at 30.7 percent and small scale enterprises at 21.8 percent (Figure 5.2).

Figure 5.2: Proportion of Enterprises' Uptake of e-Commerce Activities by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that Electricity, gas, steam and air conditioning supply section had the highest proportion of enterprises engaged in e-commerce at 100 percent followed by Financial and insurance services section at 62.3 percent and Information and communication at 60.0 percent.

Mining and quarrying had the lowest proportion of enterprises engaged in e-commerce activities at 20 percent (Figure 5.3).

Figure 5.3: Proportion of Enterprises Engaged in e-Commerce Activities by Economic Activity, Malawi 2019



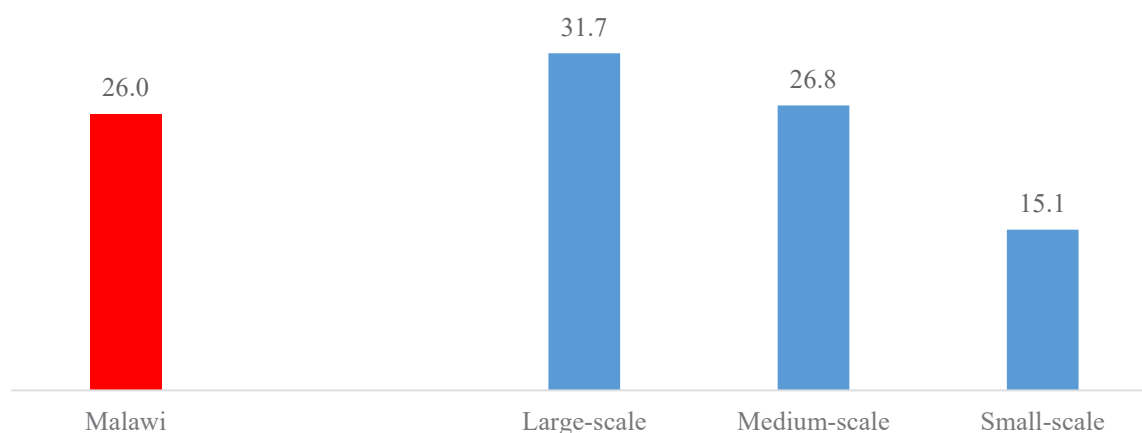
Source: National Enterprise ICT Survey, 2019

5.3 Online Purchases

5.3.1 Placed Online Orders

Out of the enterprises that engaged in e-commerce activities, 26 percent purchased goods and services online. Large scale enterprises had the largest proportion of enterprises that engaged in online purchases at 31.7 percent followed by 26.8 percent of the medium scale enterprises and 15.1 percent of small scale enterprises (Figure 5.4).

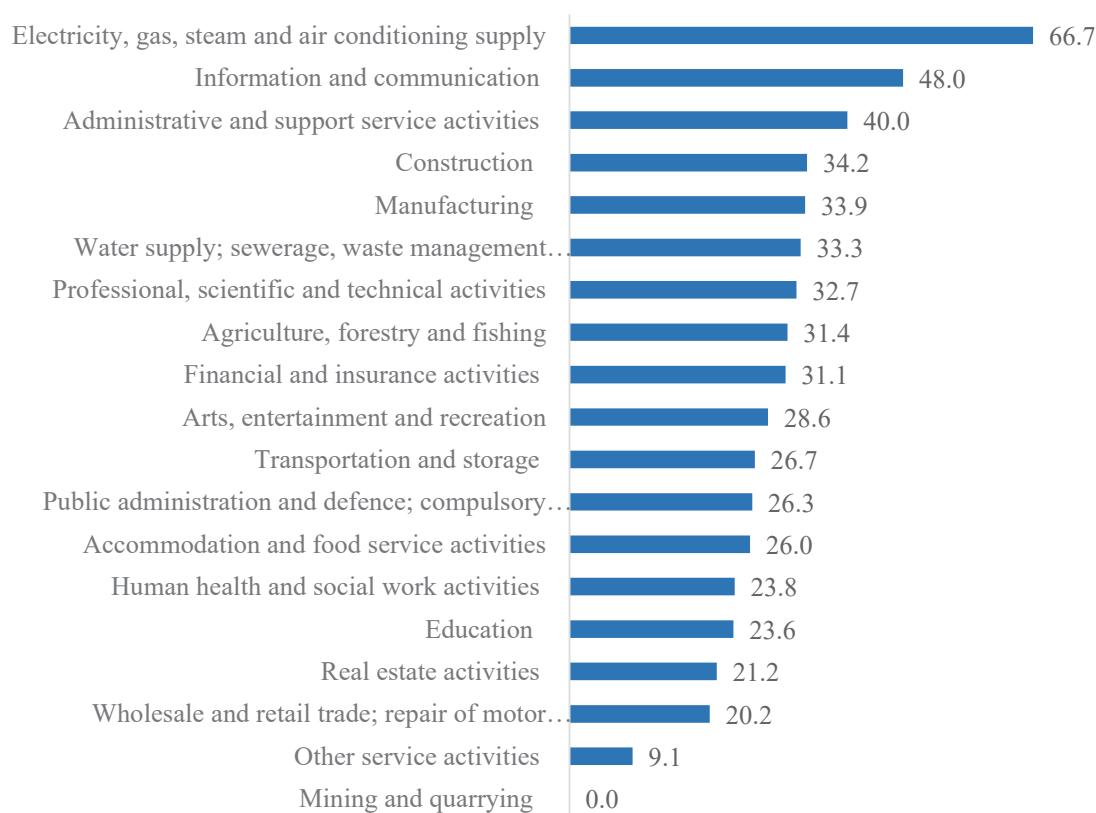
Figure 5.4: Proportion of Enterprises for Online Purchases by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that electricity, gas, steam and air conditioning supply section had the highest proportion of enterprises engaged in online purchasing at 66.7 percent followed by Information and communication section at 48.0 percent. Mining and quarry did not make any online purchase (Figure 5.5).

Figure 5.5: Proportion of Enterprises for Online Purchases by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

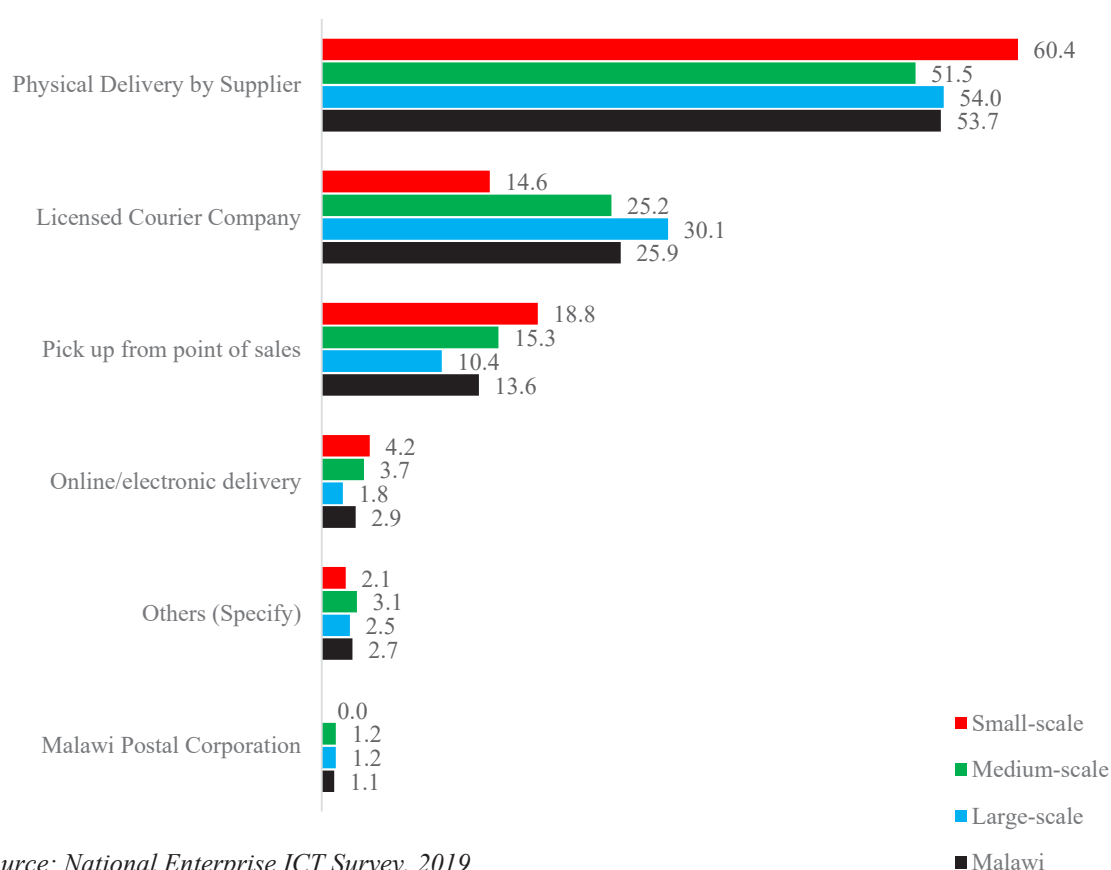
5.3.2 Delivery of Purchased Goods and Services

This section details the mode of delivery of purchased goods and services that the enterprises used during the survey.

The highest proportion (53.7 percent) of enterprise that engaged in online purchasing reported to have received their purchases through physical delivery by a supplier and the least used mode of delivery as reported by all enterprise was through the Malawi Post Corporation (MPC) at 1.1 percent.

About 60 percent of the small scale enterprises, 54.0 percent large scale enterprises and 51.5 percent of the medium scale enterprises reported to have received their purchased goods and services through physical delivery by a supplier (Figure 5.6).

Figure 5.6: Proportion of Enterprises Engaged in Online Purchasing, by Size and Mode of Delivery, Malawi 2019.



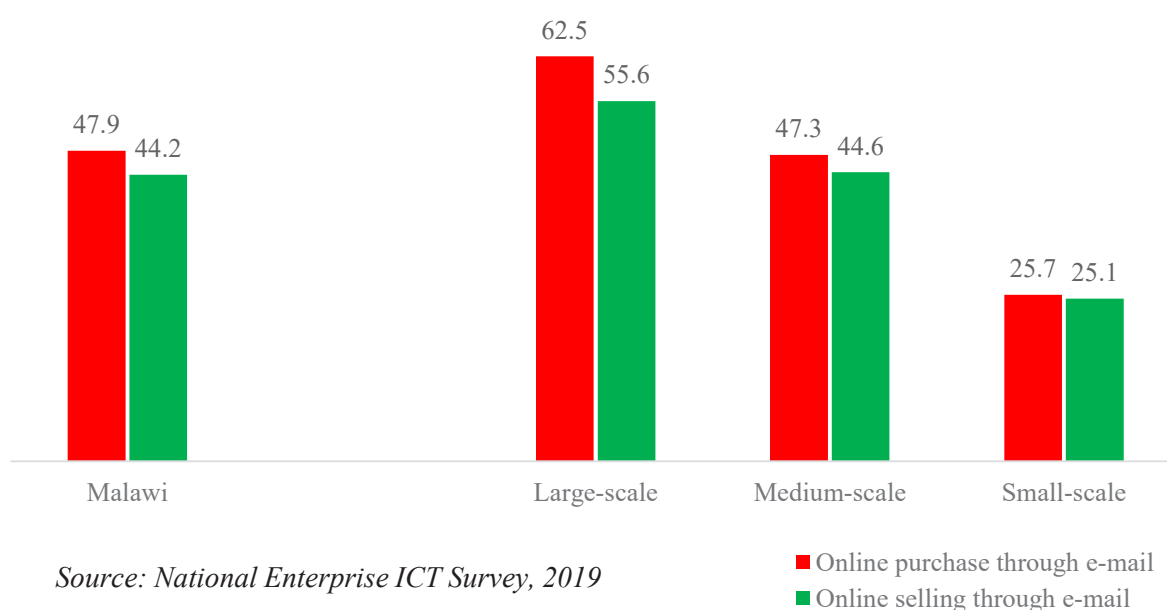
Source: National Enterprise ICT Survey, 2019

5.4 Online Transactions through Email

This section presents survey findings on e-commerce transactions that enterprises carried out through emails.

The results show that online purchases by enterprises were higher at 47.9 percent than online selling at 44.2 percent. Analysis by size of the enterprises shows that large scale enterprises had the highest proportion of enterprises engaged in online purchases and online selling at 62.5 percent and 55.6 percent, respectively, while small scale enterprises had the lowest proportion of enterprises engaged in online purchases and selling at 25.7 percent and 25.1 percent, respectively (Figure 5.7).

Figure 5.7: Proportion of Enterprises Engaged in Online Transactions through Email by Size of Enterprises, Malawi 2019

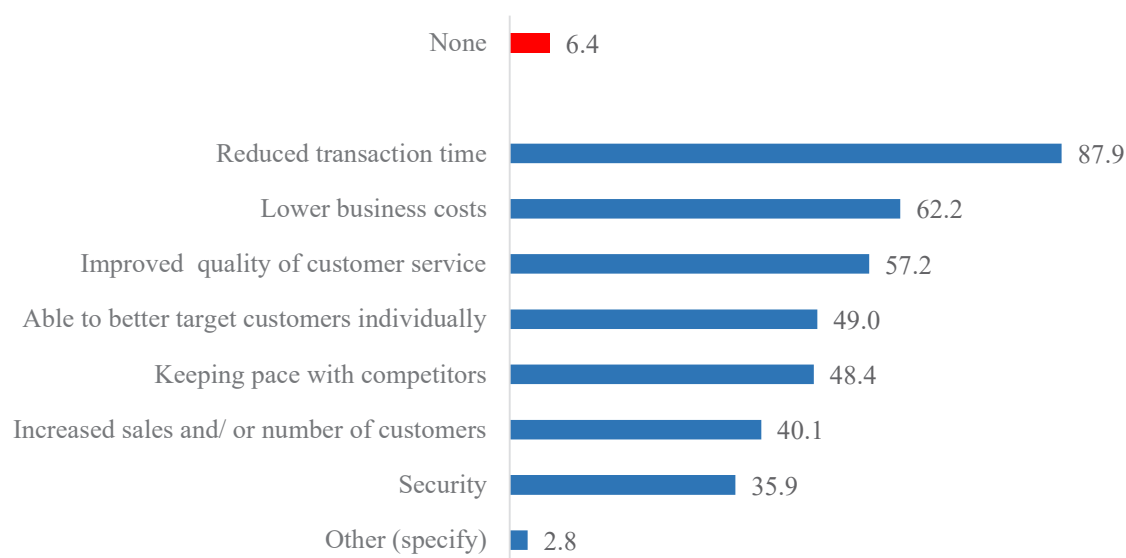


5.5 Benefits of Using Online Selling or Buying of Goods and Services

The survey also looked at the benefits of online selling and buying of goods and services accrued by the enterprises.

The top most benefit as reported by the enterprises was the reduction in transaction time at 87.9 percent, followed by lower business costs associated with using online services as reported by 62.2 percent of the enterprises. However only 6.4 percent of the enterprises reported that they did not realize any benefit from using any online transaction (Figure 5.8).

Figure 5.8: Proportion of Benefits of using Online Selling or Buying, Malawi 2019

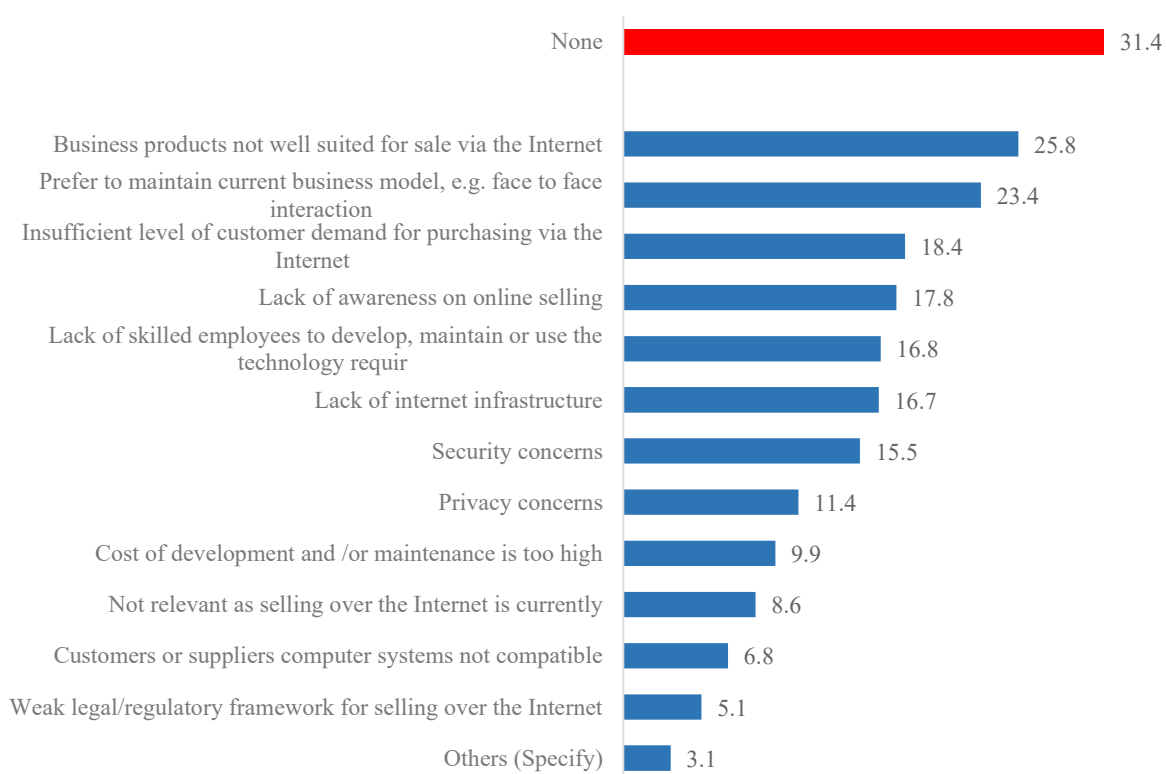


Source: National Enterprise ICT Survey, 2019

5.6 Limitations of Online Selling and Buying

Overall, 25.8 percent of the enterprises reported that their products were not well suited for sale through online platforms and 23.4 percent reported that they preferred to maintain their current business model for example through face to face engagement. However, a large proportion (31.4 percent) of enterprise did not find any limitations with online selling and buying (Figure 5.9).

Figure 5.9: Proportion of Enterprises with Limitations of Online Selling and Buying, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Cyber Security refers to the body of technologies, processes, and practices designed to protect networks, devices, programs, and data from attack.

The world is faced with an increasing use of digital technologies such as cloud computing, E-commerce or E-procurement, Internet of Things (IoT). These come with greater challenges on the level of security of data. Enterprises that have adopted such technologies have lost billions of cash via these cyber threats. Cyber threats come in form of Malware, Phishing, Man in the Middle (MitM) attack, Trojans, Ransomware, Denial of Service or Distributed Denial of Service attack (DDoS); Data Breaches etc. Here are some definitions on some of the cyber threats:

- i. **Hacking:** a hacker is someone who seeks and exploits weaknesses in a computer system or computer network.
- ii. **Phishing:** is the attempt to acquire sensitive information such as usernames, passwords, and credit card details (and sometimes, indirectly, money), often for malicious reasons.
- iii. **Ransom ware:** is a type of malware that restricts access to the infected computer system in some way and demands that the user pay a ransom to the malware operators to remove the restriction.
- iv. **Vishing:** is the criminal practice of using social engineering over the telephone system to gain access to private personal and financial.
- v. **Man in the Middle (MitM)** is where an attacker establishes a position between the sender and recipient of electronic messages and intercepts them, perhaps changing them in transit. The sender and recipient believe they are communicating directly with one another. In some cases it may be used to confuse an enemy
- vi. **Data Breaches:** Is a theft of data by a malicious actor. Motives for data breaches include crime (i.e. identity theft), a desire to embarrass an institution
- vii. **Denial of Service attack or Distributed Denial of Service Attack (DDoS).** Where an attacker takes over many (perhaps thousands) of devices and uses them to invoke the functions of a target system, e.g. a website, causing it to crash from an overload of demand

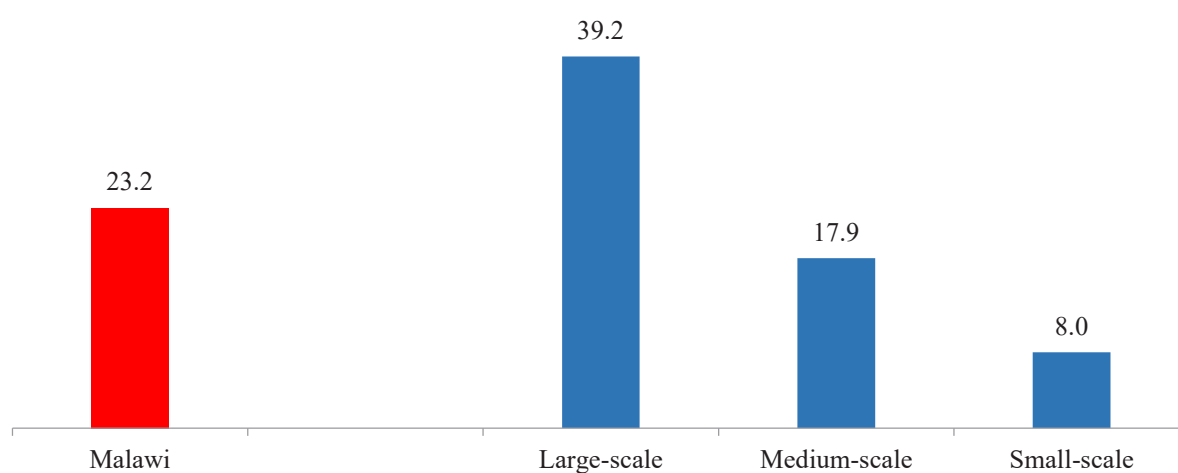
The survey therefore tried to establish if enterprises experienced such attacks in 2019, what measures were put in place and if at all these crimes were reported to authorities.

6.1 Enterprises with an ICT Security Policy

In the context of ICT, the ICT security policy is put in place to protect ICT sectorial components which includes individuals (employees and users), information and technologies from being abused and exploited.

The results indicate that 23.2 percent of enterprises had in place an ICT security policy. Among the large scale enterprises, 39.2 percent had an ICT Security Policy in place followed by medium scale enterprises at 17.9 percent and 8.0 percent for small scale enterprises (Figure 6.1).

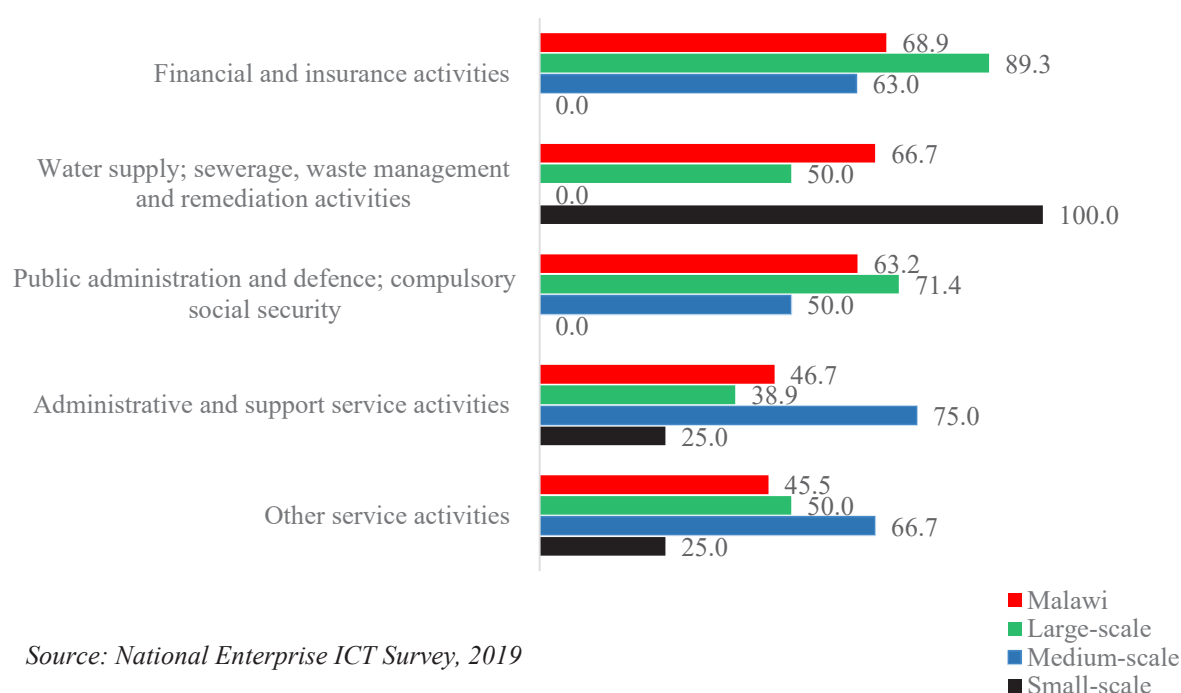
Figure 6.1: Proportion of Enterprises with ICT Security Policies by Size of the Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that Financial and insurance activities had the highest proportion of institutions that had put an ICT policy in place in 2019 at 68.9 percent followed by enterprises in Water supply; sewerage, waste management and remediation activities at 66.7 percent and Public Administration and defense; compulsory social security at 63.2 percent. Enterprises engaged in Mining and quarrying and Arts, entertainment and recreation reported not to have any ICT Security policy (Figure 6.2).

Figure 6.2: Percentage of Top 5 Enterprises with the ICT Security Policy by Economic Activities, Malawi 2019



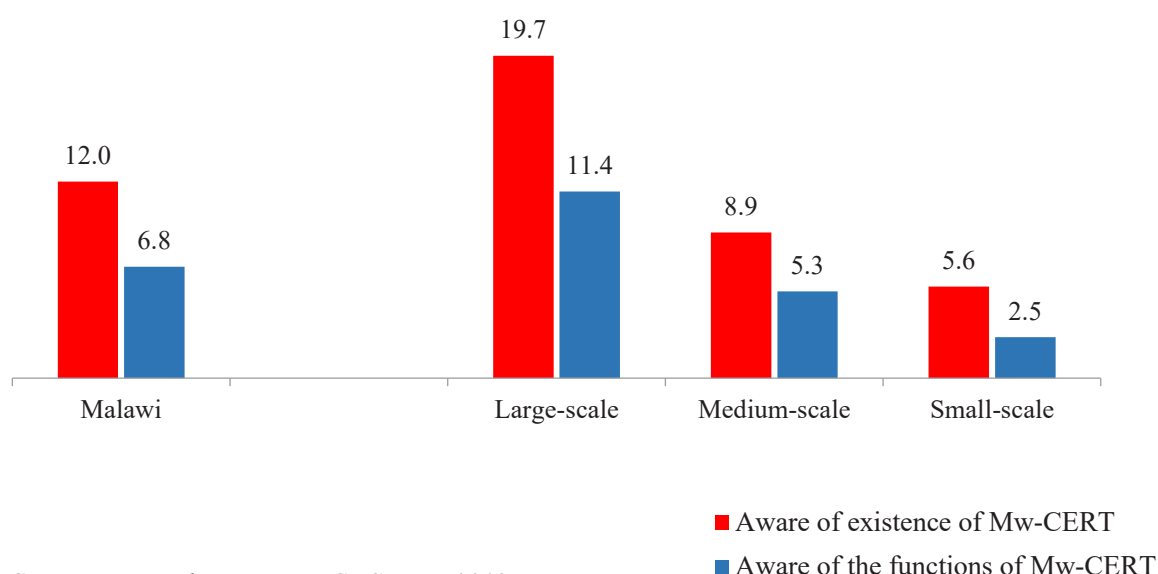
6.2 Awareness of the Malawi Computer Emergency Response Team (Mw- Cert)

Computer Emergency Response Team (CERT) is department within MACRA that acts as a focal point for coordination of cyber-security related issues at national and international level. Malawi CERT was established pursuant to Section 6 of the Electronic Transaction and Cyber Security act, 2016 of the Laws of Malawi to take charge of Critical information infrastructure protection actions and serve as a base for national coordination to respond to cyber security threats. The study endeavored to establish if enterprises were aware of the existence and functions of the team.

6.2.1 Awareness of the Existence and Functions of Mw - Cert

Overall, 12.0 percent of the enterprises were aware of the Malawi Computer Emergency Response Team (Mw- Cert) while 6.8 percent of these knew its functions. By size, 19.7 percent of large-scale enterprises heard about Mw-Cert, and 11.4 percent of these knew its functions. About 9 percent of medium scale enterprises and 5.6 percent of small-scale enterprises heard about Mw-Cert (Figure 6.3).

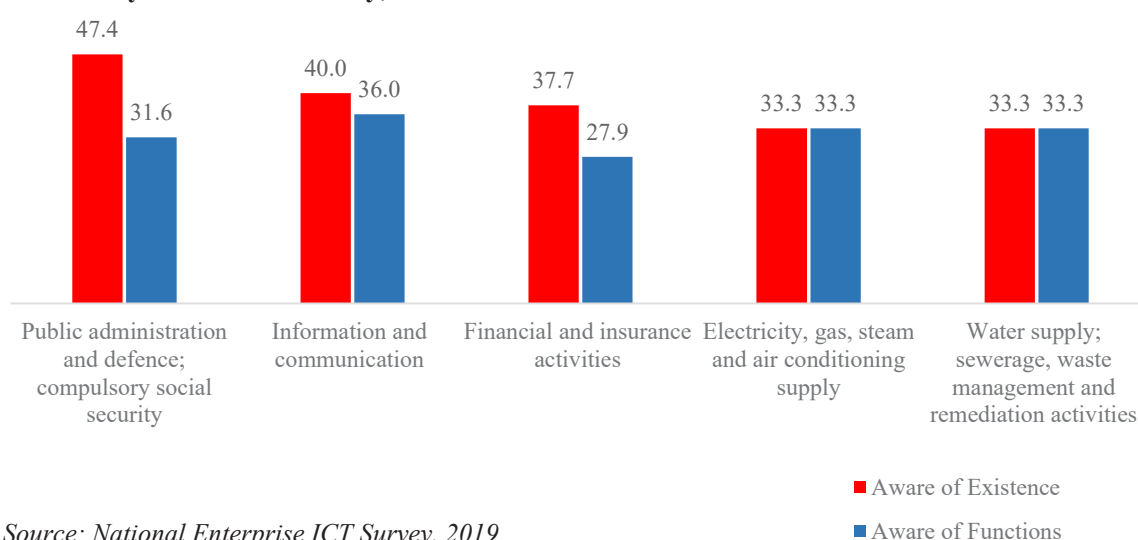
Figure 6.3 Proportion of Enterprises that were Aware of the Existence and Functions of Mw-Cert by Size of the Enterprise -2019.



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that 47.4 percent of Public administration and defense, compulsory social security enterprises knew about Mw-Cert with 31.6 percent of these, reporting to have known its functions. This was followed by Information and communication at 40.0 percent and Financial and Insurance activities at 37.7 percent. About 33 percent of enterprises in the Electricity, gas, steam and Air conditioning supply and in the Water supply, Sewerage, Waste management and remediation activities sectors that reported to have heard about the existence of Mw-Cert also reported to have known its functions (Figure 6.4).

Figure 6.4: Proportion of Top five Enterprises that were Aware of existence and Functions of Mw-Cert by Economic Activity, Malawi 2019



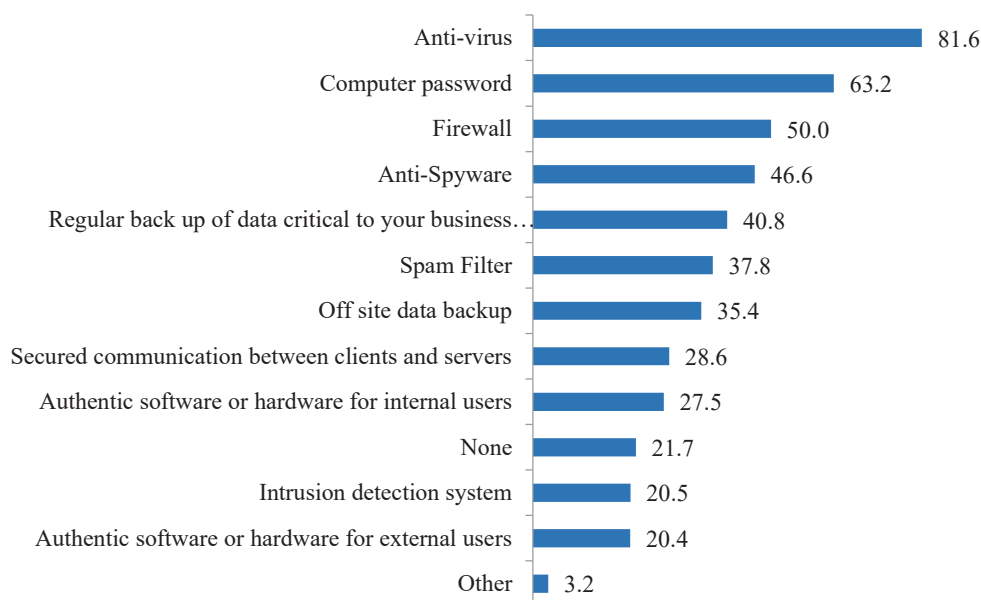
Source: National Enterprise ICT Survey, 2019

6.3 Type of IT Security Measures in Place

In fighting against IT related attacks and irregularities upon enterprises, IT security measures are executed in preserving quality and performance of the IT services of enterprises. The survey wanted to know if enterprises were using any of the known up to date IT security measures.

The results show that 81.6 percent of the enterprises used Anti-virus as an IT security measure followed by a computer password at 63.2 percent and firewall at 50.0 percent (Figure 6.5).

Figure 6.5: Proportion of IT Security Measures used by Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

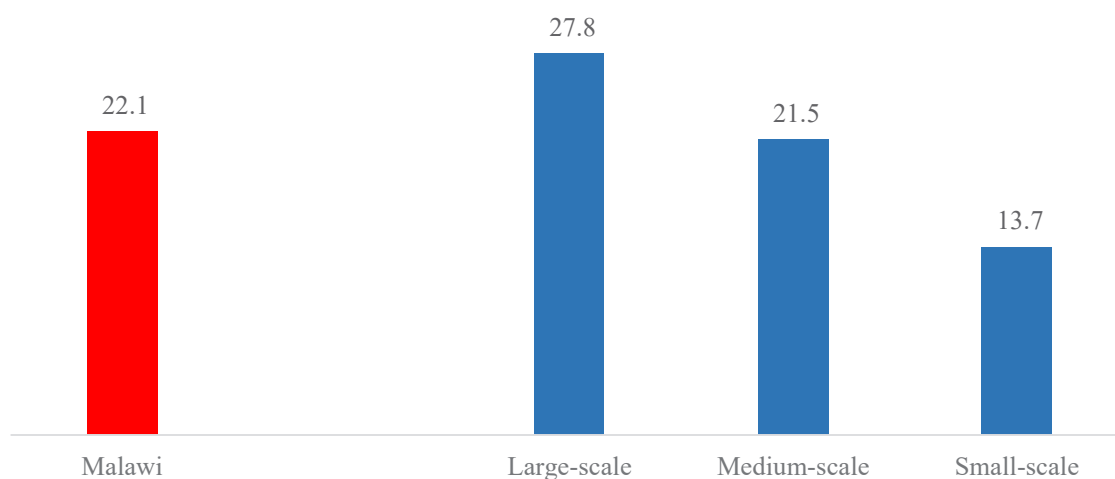
6.4 Enterprises that Lost Data through Virus Attack and Measures used to Retrieve the Lost Data

6.4.1 Virus Attack and Loss of Data

Viruses cause a lot of damage to your computer especially if it is connected to the internet or if you share external disks that have been used elsewhere. Viruses may be used to obtain personal information about you or even, to steal your identity. They may also slow down performance of your computer, frequent crashes or unwanted programs popping up when you switch on your computer.

Overall, 22.1 percent of enterprises reported to have experienced loss of data through a virus. About 28 percent of large scale enterprises, 21.5 percent of the medium scale enterprises and 13.7 percent of the small scale enterprises reported to have been attacked by viruses and lost data (Figure 6.6).

Figure 6.6: Proportion of Enterprises that Experienced Virus Attack by Size of the Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity, 66.7 percent of enterprises in Water supply; sewerage, waste management and remediation activities lost data through virus attack followed by enterprises in public administration and defense; compulsory social security at 47.4 percent. Arts and recreation activities was the least affected at 14.3 percent (Figure 6.7).

Figure 6.7: Proportion of Enterprises that Lost Data Due to Virus Attack by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

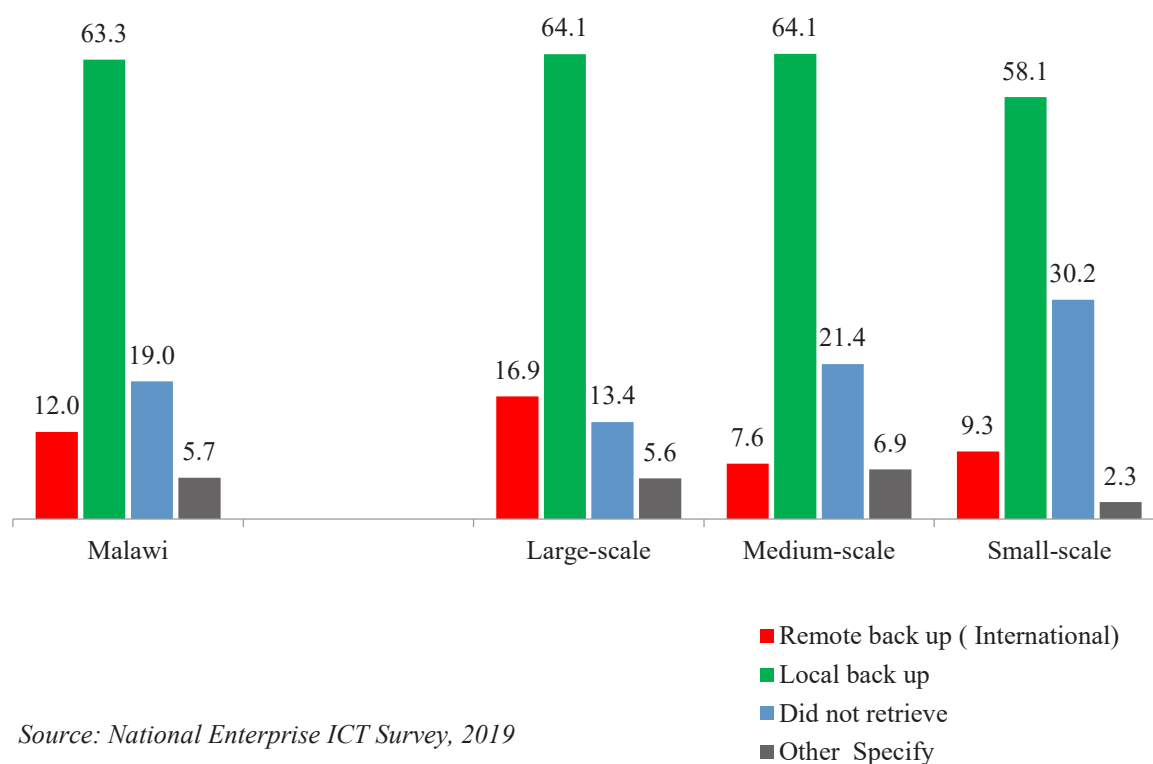
6.4.2 Enterprises' Means of Retrieving Lost Data

As a means of retrieving lost data, overall, 63.3 percent of the enterprises used local backup followed by remote backup (Internationally) at 12.0 percent. The results also indicate that 19.0 percent of the enterprises did not retrieve their lost data.

By size of enterprises, 64.1 percent of large and medium scale enterprises retrieved their lost data using Local back up and 58.1 percent for small- scale businesses. However large enterprises had a highest percentage of retrieving the lost data via remote back up internationally at 16.9 percent followed by 9.3 percent for small scale enterprises and 7.6 percent for medium scale enterprises.

The highest proportion (30.2 percent) of enterprises that did not retrieve data was reported by small scale enterprises followed by medium scale enterprises at 21.4 percent and large-scale enterprises at 13.4 percent (Figure 6.8).

Figure 6.8: Proportion of Enterprises' Means of Retrieving Lost Data by Size of the Enterprise, Malawi 2019



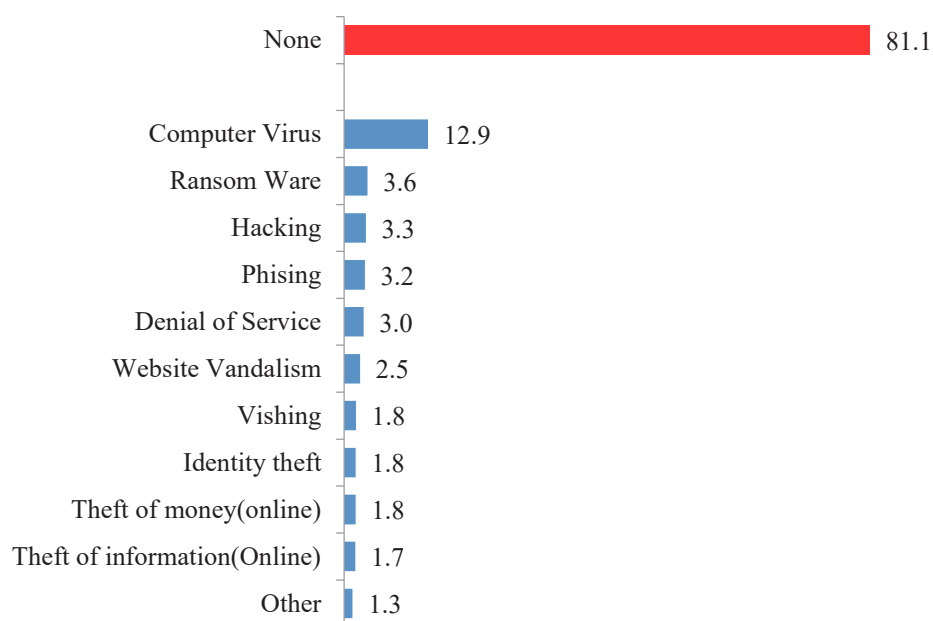
Source: National Enterprise ICT Survey, 2019

6.5 Enterprises that Experienced Online Crime

6.5.1 Type of Online Crime

Overall, 81.1 percent of the enterprises did not experience online crime. For the few enterprises that experienced online crime, computer virus featured highly at 12.9 percent. Theft of information (online) was the least crime experienced by enterprises at 1.7 percent (Figure 6.9).

Figure 6.9: Proportion of Enterprises that Experienced Online Crime by Type of Crime, Malawi 2019

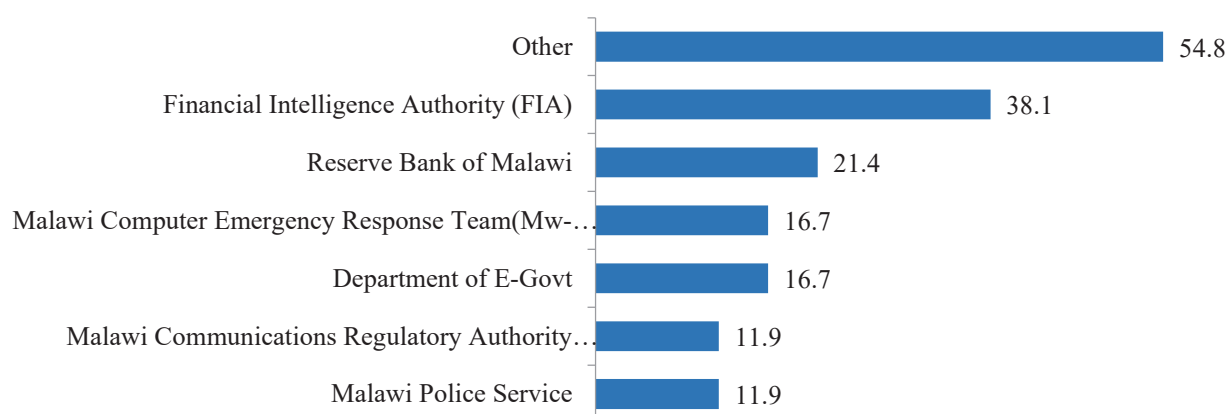


Source: National Enterprise ICT Survey, 2019

6.5.2 Institutions where Enterprises Reported Online Crimes

The results show that 38.1 percent of affected enterprises reported their crimes at The Financial Intelligence Authority (FIA) followed by The Reserve Bank of Malawi (21.4 percent). Malawi Police services and MACRA were the least institutions to which enterprises reported online crime activities at 11.9 percent each (Figure 6.10).

Figure 6.10: Proportion of Institutions where Enterprises Reported Online Crimes, Malawi 2019

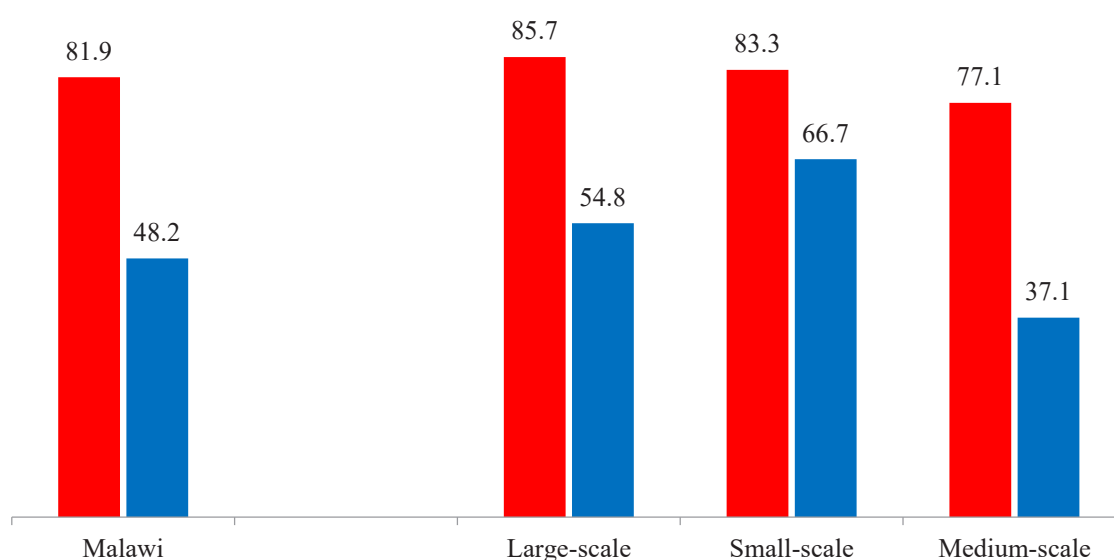


Source: National Enterprise ICT Survey, 2019

6.5.4 Enterprises that reported Online Crime to Enterprise's Own Employees or External Service Provider

Apart from reporting to authorities, the crimes were also reported to enterprise's own employees or other external service providers. The results show that 81.9 percent of enterprises also reported online crime to enterprise own employees while 48.2 percent to external service provider (Figure 6.11).

Figure 6.11: Proportion of Enterprises that Also Reported online Crimes to Enterprise Own Employees or External Service Provider, Malawi 2019



Source: National Enterprise ICT Survey, 2019

■ Enterprise own employees
■ External service provider

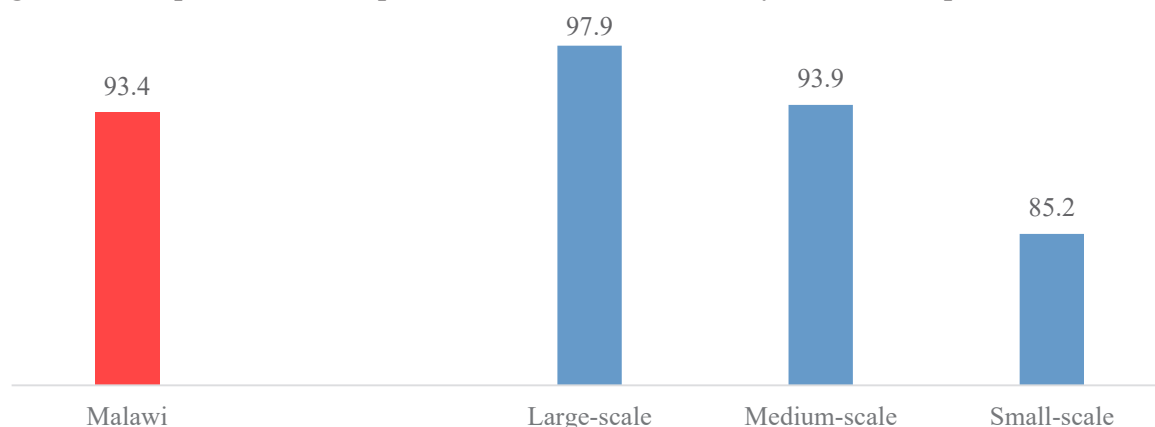
7 POSTAL SERVICES

This chapter presents findings on postal and courier services. Postal Services are services provided by Government owned Malawi Posts Corporation (MPC) relating to the receipt, transmission and delivery of any postal articles from one point to another within or beyond the boundaries of Malawi. The services offered include mail, electronic money transfers, post office boxes, and parcels/packages among others. Post offices are available in all districts of Malawi to increase access and usage of postal services. On the other hand, courier services are services for conveyance/forward of packages in respect of which an undertaking is given to deliver the article to a specified destination within a specified time frame. This service is mostly provided by private operators.

7.1 Ownership of Post Office Box

The results show that 93.4 percent of the enterprises had a post office box. Analysis by size of the enterprise shows that large scale enterprises had the largest proportion (97.9 percent) of enterprises owning a post office box. Small scale enterprises reported the lowest proportion of enterprises owning a post office box at 85.2 percent (Figure 7.1).

Figure 7.1: Proportion of Enterprises with a Post Office Box by Size of Enterprise, Malawi 2019

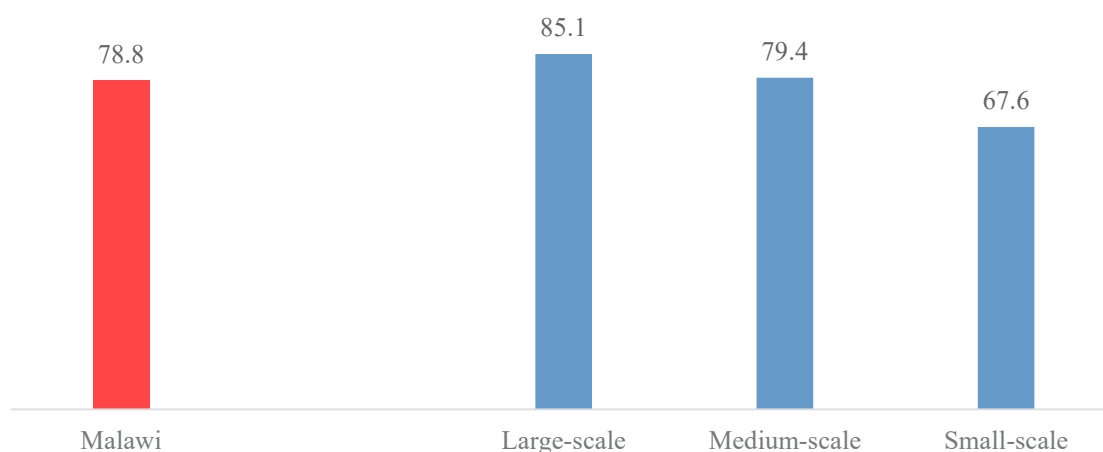


Source: National Enterprise ICT Survey, 2019

7.1.1 Enterprises that Used Any Post Service

This section presents the proportion of enterprises that used at least one postal service. Over three quarters (78.8 percent) of the enterprises reported to have used at least a postal service. Analysis by enterprise size shows that 85.1 percent of large scale enterprises, 79.4 percent of medium scale enterprises and 67.6 percent of small scale enterprises used at least a postal service (Figure 7.2).

Figure 7.2: Proportion of Enterprises Using Postal Services by Size of Enterprises, Malawi 2019



Source: National Enterprise ICT Survey, 2019

7.1.2 Type of Postal Services used

The survey further looked at the type of postal services used by enterprises. Overall, sending and receiving mail was the most used postal service (90.1 percent) followed by delivery of parcels or packets at 65.9 percent. Money transfer service was the least used service at 6.8 percent. Analysis by enterprise size shows that sending and receiving mail was the most used postal service by small, medium and large enterprises at 89.1, 90.3 and 90.2 percent respectively. The least used service by enterprise size was money transfer service with 5.9, 6.9 and 7.3 percent for small, medium and large enterprises, respectively (Figure 7.3).

Figure 7.3: Proportion of Enterprises that Used Postal Services by Type of Service and by Size of Enterprises, Malawi 2019

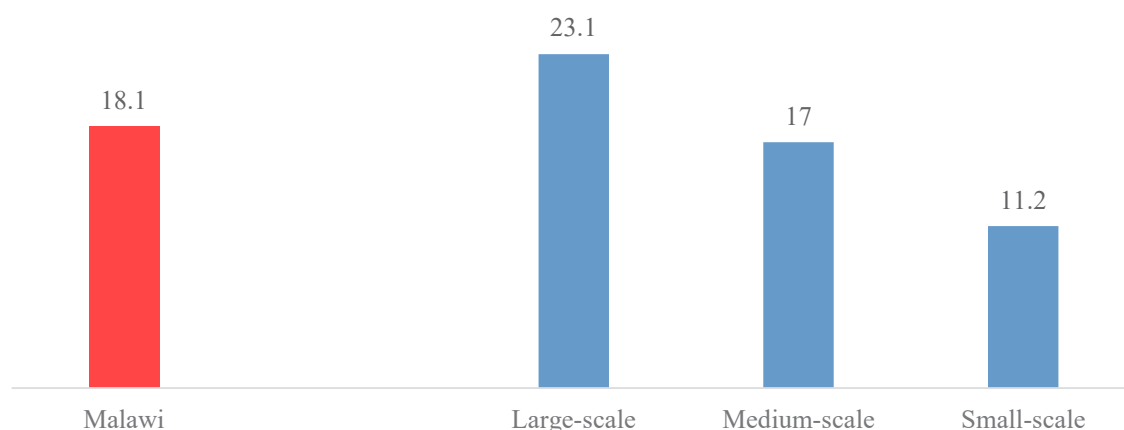


Source: National Enterprise ICT Survey, 2019

7.2 Enterprises that received orders via post mail

The survey also sought to establish enterprises' use of post mail to receive orders for goods and services. In total, 18.1 percent of the enterprises received orders for goods and services through the post mail service. The proportion of enterprises receiving orders through the post mail was higher among large enterprises at 23.1 percent. Small scale enterprises reported the lowest proportion at 11.2 percent (Figure 7.4).

Figure 7.4: Proportion of Enterprises that Received Orders via Post Mail by Size of Enterprises, Malawi 2019



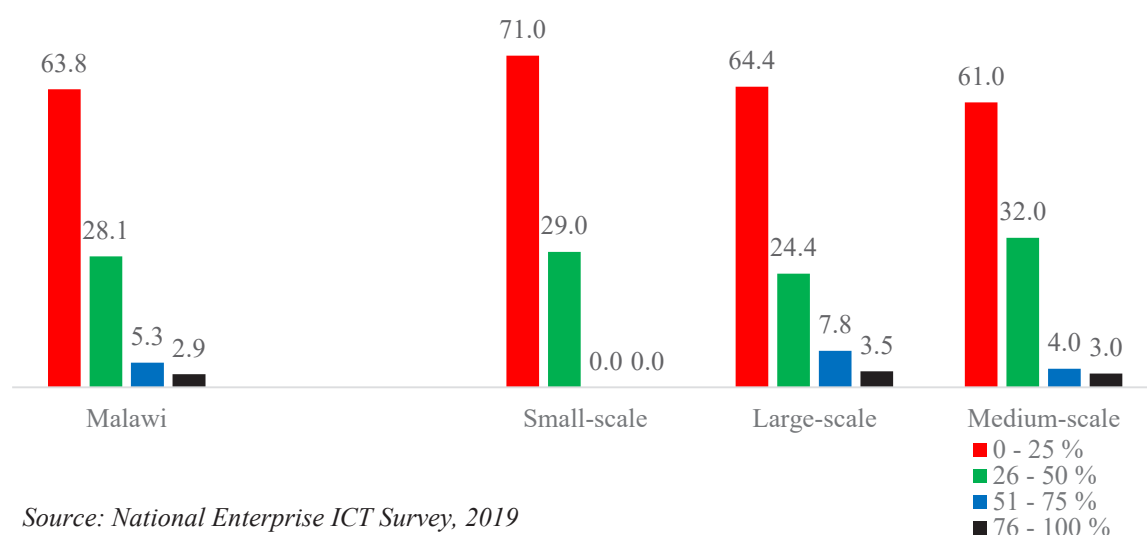
Source: National Enterprise ICT Survey, 2019

7.2.1 Proportion of Orders Received via Post Mail to Total Orders

The survey further sought to establish the proportion of orders that were received via post mail as a percentage of total orders received by enterprises.

Overall, 63.8 percent of enterprises received less than 25 percent of all orders through the post mail, while 28.1 percent of enterprises reported to have received between 26 and 50 percent of all orders via post mail. Analysis by enterprise size shows that 71.0 percent of small scale enterprises, 64.4 percent of large scale enterprises and 61.0 percent of medium scale enterprises received less than 25 percent of orders via the post mail (Figure 7.5).

Figure 7.5: Proportion of Orders Received via Post Mail to Total Orders by Size of Enterprises, Malawi 2019



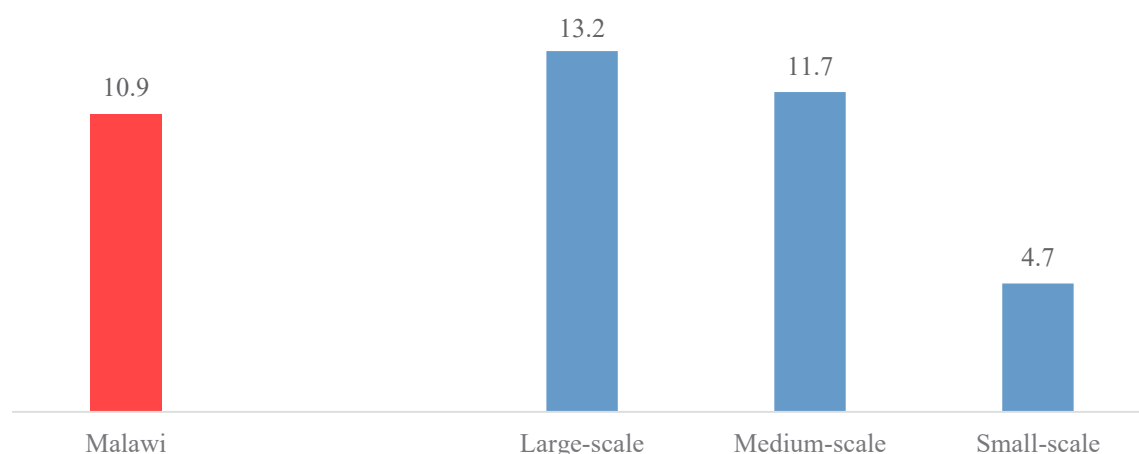
Source: National Enterprise ICT Survey, 2019

7.2.2 Enterprises that placed orders via post mail

The survey also sought to establish enterprises' use of post mail to place orders for goods and services.

In total, 10.9 percent of enterprises placed orders for goods and services through the post mail service. Analysis by enterprise size indicates that the proportion of enterprises placing orders through the post mail was higher among large scale enterprises at 13.2 percent. Small scale enterprises reported the lowest proportion at 4.7 percent (Figure 7.6).

Figure 7.6: Proportion of Enterprises that Placed Orders via Post Mail by Size of Enterprise, Malawi 2019



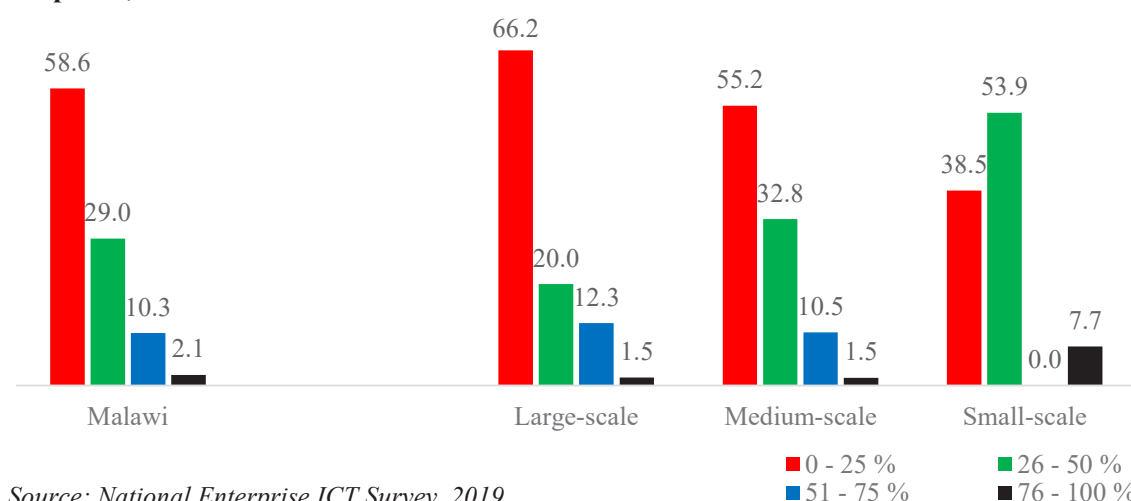
Source: National Enterprise ICT Survey, 2019

7.2.3 Proportion of Orders Placed via Post Mail to Total Orders

The survey also sought to establish the proportion of orders that were placed via post mail as a percentage of total orders placed by enterprises.

Overall, 58.6 percent of enterprises placed less than 25 percent of all orders through the post mail, 29.0 percent placed between 26 and 50 percent of all orders via post mail. About 2 percent of enterprises placed between 76 and 100 percent of all orders through the post mail. Analysis by enterprise size shows that 66.2 percent of large scale enterprises, 55.2 percent of medium enterprises and 38.5 percent of small scale enterprises, placed less than 25 percent of orders via the post mail (Figure 7.7).

Figure 7.7: Proportion of Enterprises that Placed Orders via Post Mail to Total Orders by Size Enterprises, Malawi 2019

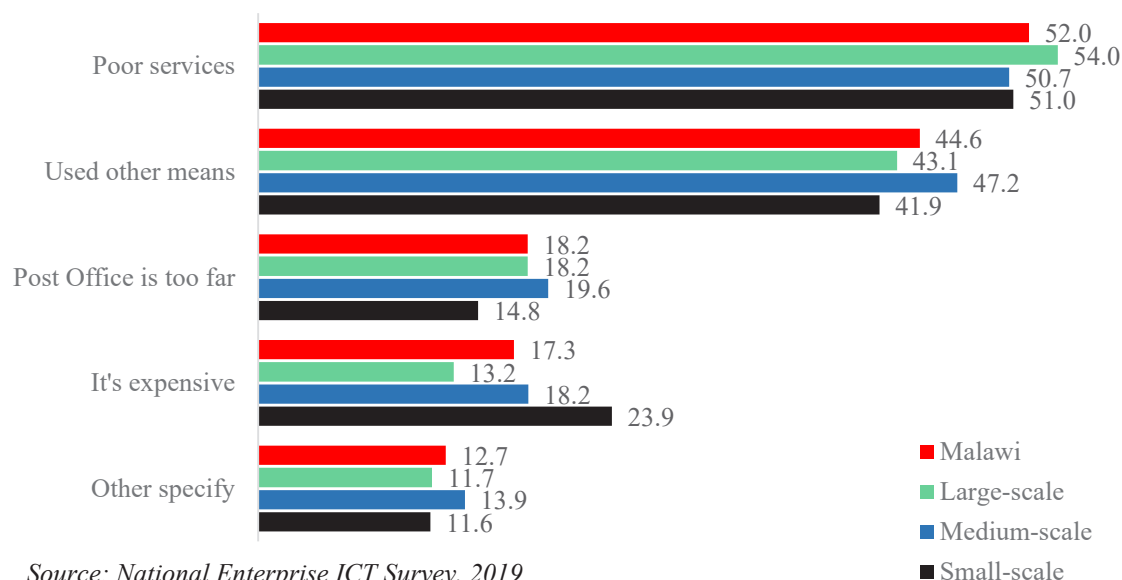


Source: National Enterprise ICT Survey, 2019

7.2.4 Challenges Faced When Using Postal Services

According to the results, 52.0 percent of the enterprises reported that postal services are of poor quality. The other challenges reported by enterprises were that post offices are too far and that services are expensive at 18.2 percent and 17.3 percent, respectively. Analysis by enterprise size also shows that 54.0 percent of large scale enterprises, 51.0 percent of small scale enterprises and 50.7 percent of medium scale enterprises reported postal services are of poor quality (Figure 7.8).

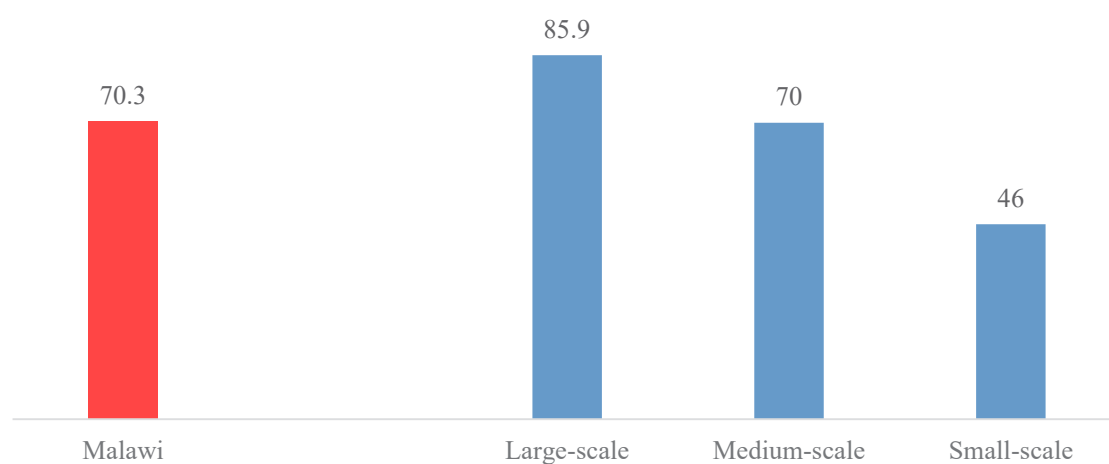
Figure 7.8: Proportion of Enterprises that faced Challenges Faced when Using Postal Services by Type of Challenge and by Size of Enterprise, Malawi 2019



7.3. Use of Courier Services

Over two thirds of enterprises (70.3 percent) reported to have used courier services. Analysis by enterprise size shows that 85.9 percent of large scale enterprises, 70.0 percent of medium scale enterprises and 46.0 percent of small scale enterprises used courier services (Figure 7.9).

Figure 7.9: Proportion of Enterprises Using Courier Services by Size of Enterprises, Malawi 2019

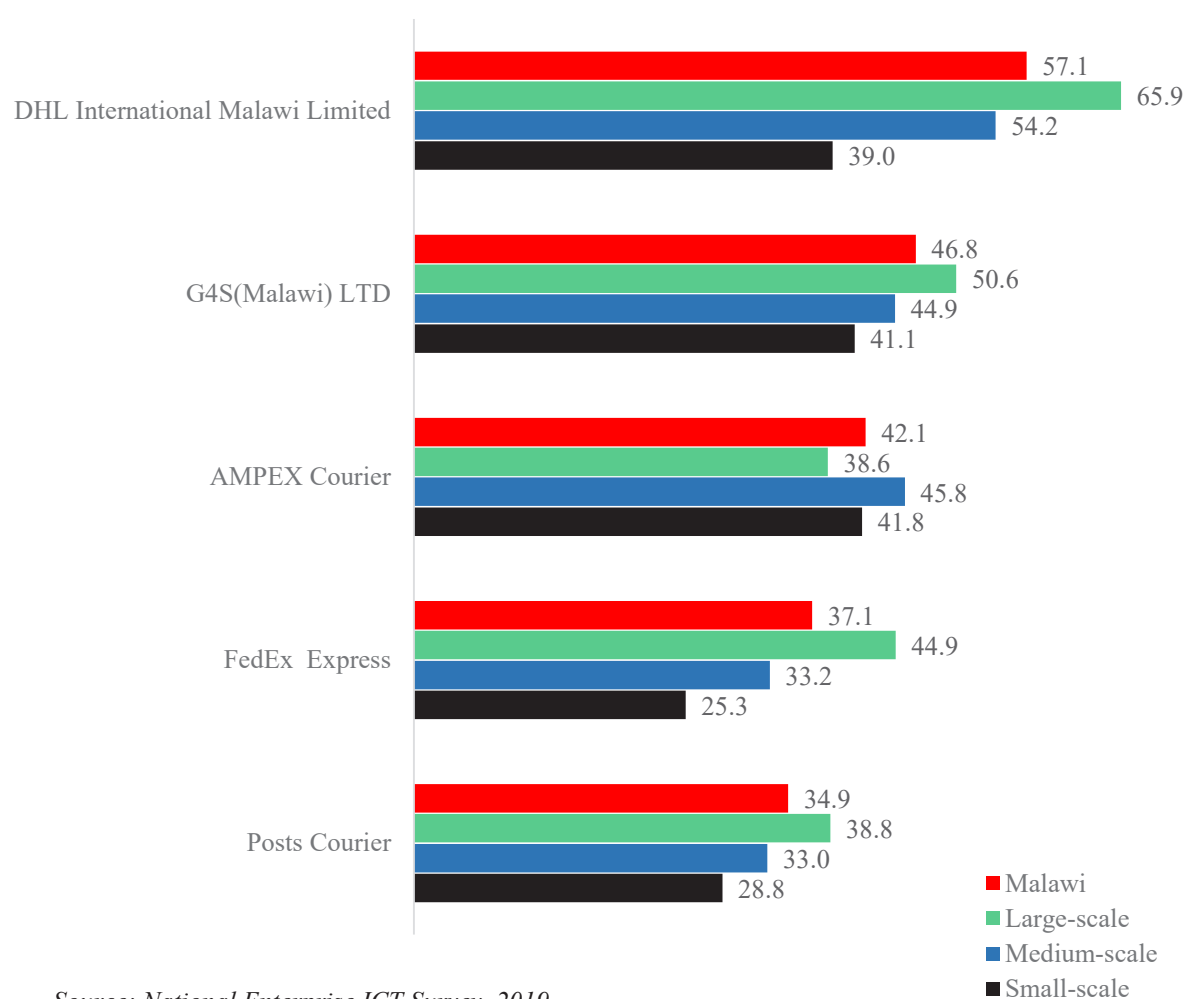


Source: National Enterprise ICT Survey, 2019

7.3.1 Courier Operators Used

Overall, 57.1 percent of enterprises reported to have used DHL International Malawi Limited followed by G4S Malawi Limited at 46.8 percent and AMPEX Courier at 42.1 percent. Analysis by enterprise size shows that 65.9 percent of large scale enterprises, 54.2 percent of medium scale enterprises and 39.0 percent of small scale enterprises reported to have used DHL International Limited. Among small scale enterprises, AMPEX Courier Limited was the mostly used courier operator at 41.8 percent (Figure 7.10).

Figure 7.10: Proportion of Enterprises that Used Courier Operators by Top 5 Operators and by Size of Enterprise, Malawi 2019

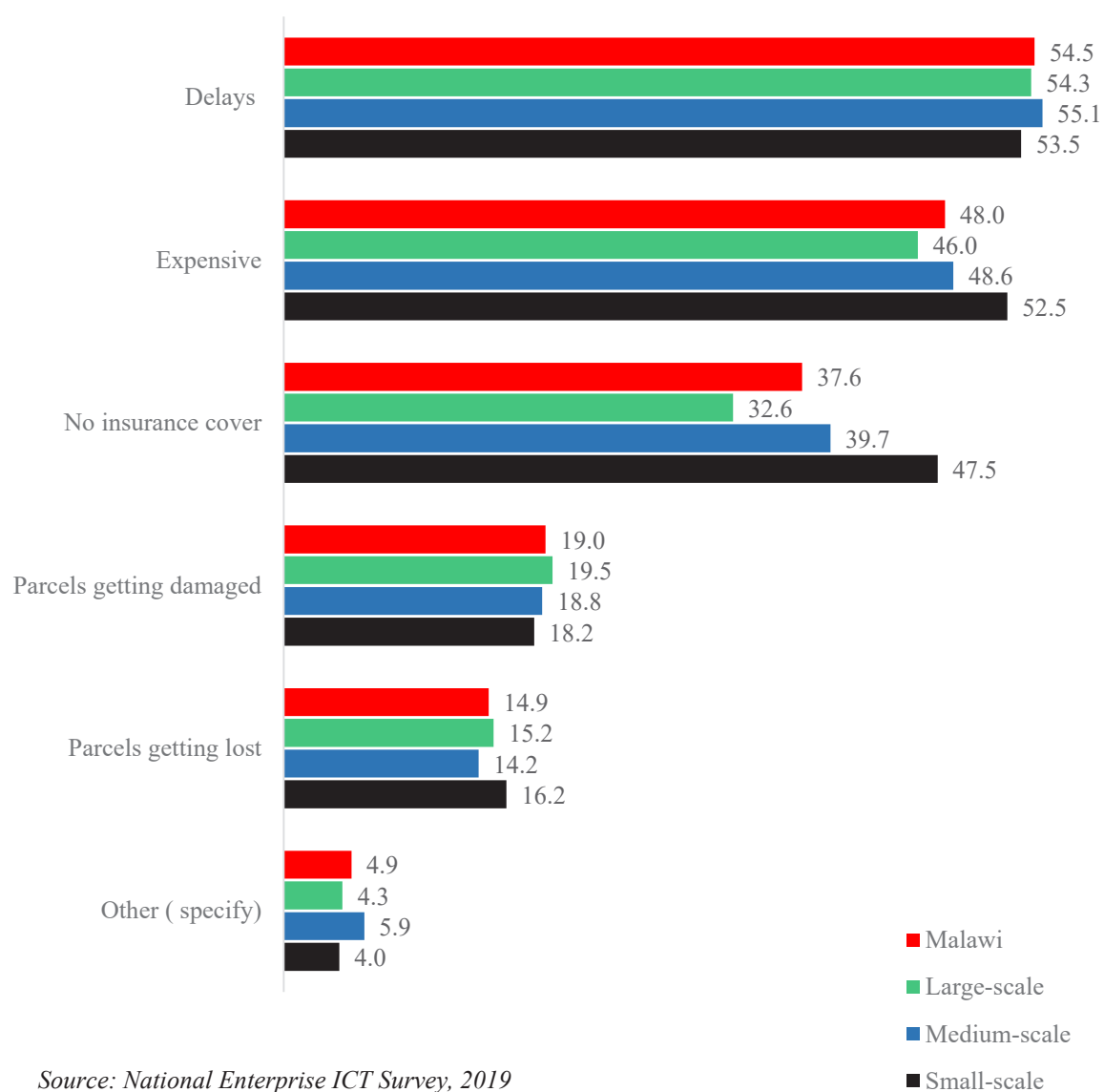


Source: National Enterprise ICT Survey, 2019

7.3.2 Challenges Faced When Using Courier Services

According to the results, delayed delivery of articles was reported as a major challenge in using courier services at 54.5 percent followed by high cost of the services and no insurance cover at 48.0 percent and 37.6 percent, respectively. (Figure 7.11).

Figure 7.11: Proportion of Enterprises that Faced Challenges Using Courier Services by Type of Challenge and Size of Enterprise, Malawi 2019



Source: National Enterprise ICT Survey, 2019

8 ICT MANAGEMENT AND EXPENDITURES

Information and Communications Technology (ICT) management is an integrated approach to sustainable maintenance of ICT assets and processes focusing on the emerging issues from business processes that directly or indirectly impact business performance. ICT management represents the core values of an enterprise which are critical for a sustainable performance system of an enterprise and in general addresses; (i) Operations support services – detailing infrastructure requirements and their management; (ii) Applications development and management; and (iii) User support services, as an interface point for day-to-day operation of ICT assets and processes. Enterprises adopt different approaches driven by their operational strategies, mission, and the level of investment in technologies in order to provide a sustainable environment.”

8.1 National ICT Policy

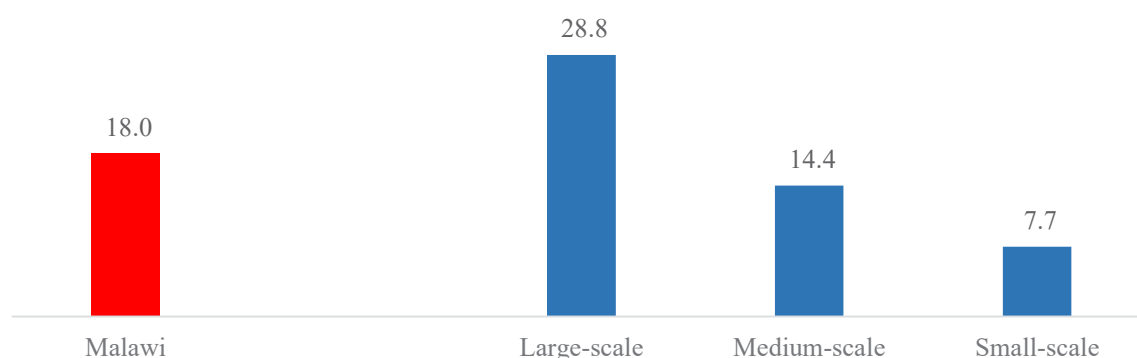
The Malawi Government adopted the National ICT Policy in 2013 in line with the medium-term national development agenda, the MGDS II which rolled over into MGDS III in 2017. The National ICT Policy articulates a framework and guidelines set out by governments and key stakeholders committed to the process of enhancing digital technology to the citizenry and communities so as to advance the information society.

8.1.1 National ICT Policy Awareness

The survey sought to establish whether enterprises were aware of the 2013 National ICT Policy in the country.

About 18 percent of the enterprises reported that they were aware of the national ICT policy with 28.8 percent of the large scale enterprises, 14.4 percent of the medium scale enterprises and 7.7 percent of small scale enterprises reporting that they were aware of the national ICT policy (Figure 8.1).

Figure 8.1: Proportion of Enterprises’ Awareness of National ICT Policy by Size, Malawi 2019

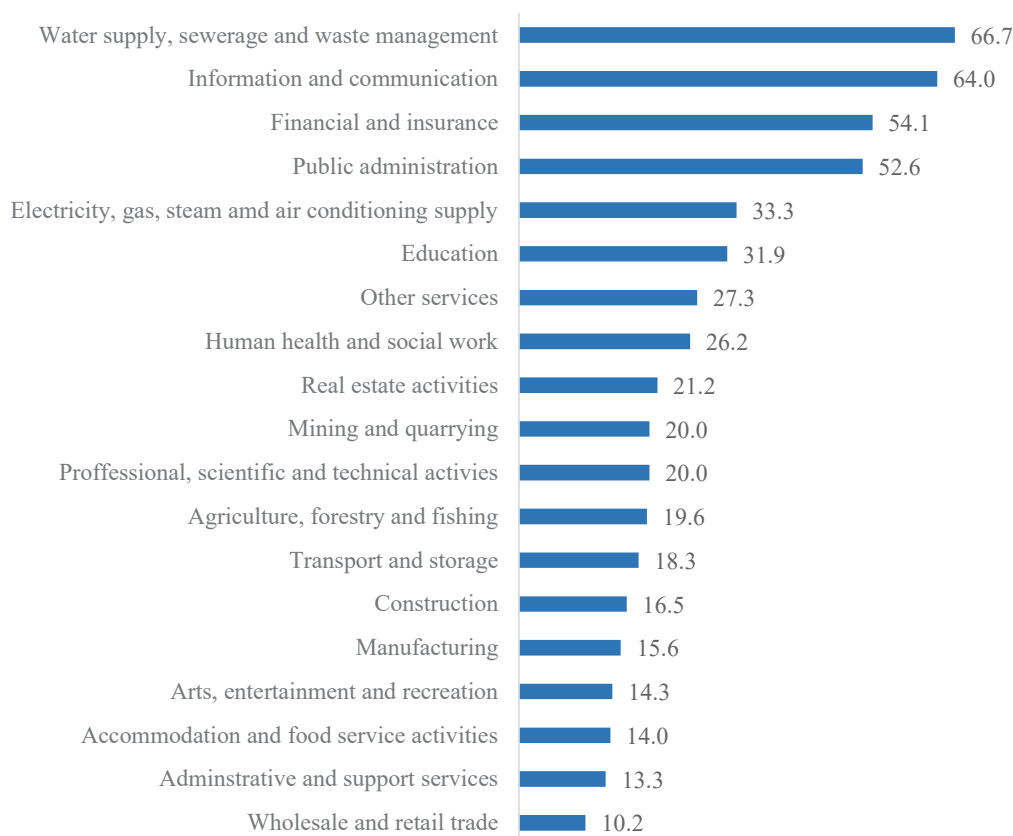


Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that enterprises in the Water supply, sewerage, waste management and remediation activities section reported the highest proportion of enterprises that were aware of the National ICT Policy at 66.7 percent followed by Information and communication section at 64.0

percent. Wholesale and retail trade; repair of motor vehicles and motorcycles section reported the least proportion (10.2 percent) of enterprises that were aware of the National ICT Policy (Figure 8.2).

Figure 8.2: Proportion of Enterprises Awareness of National ICT Policy by Economic Activity, Malawi 2019



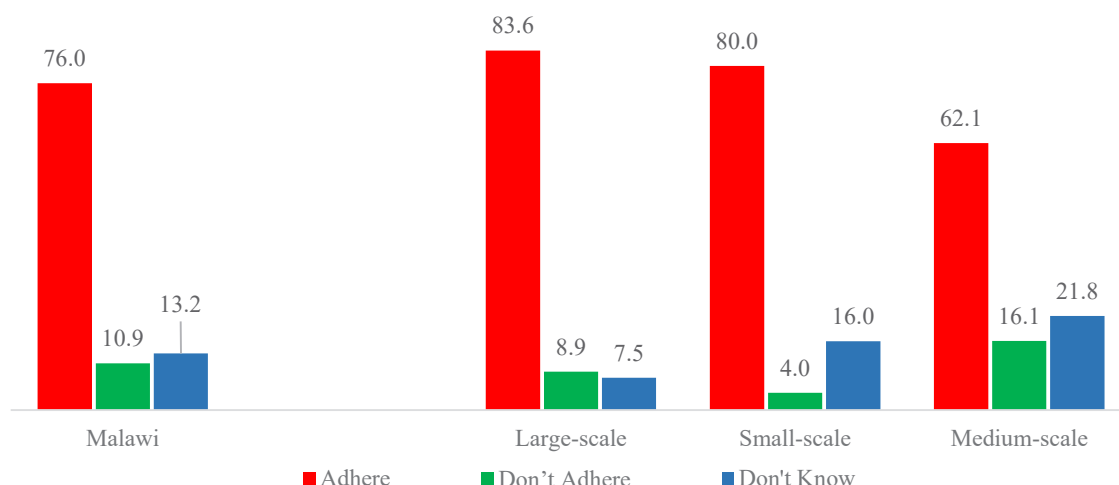
Source: National Enterprise ICT Survey, 2019

8.1.2 Adherence to National ICT Policy

The survey undertook to explore if the enterprises were aware of the National ICT Policy and were adhering to its objectives and goals.

The results show that 76.0 percent of the enterprise that reported that they were aware of the National ICT Policy were also adhering to its principles. Analysis by enterprise size shows that 83.6 percent of the large size enterprise, 80.0 percent of the medium scale enterprises and 62.1 percent of the small scale enterprises that reported that they were aware of the National ICT Policy were also adhering to its principles (Figure 8.3).

Figure 8.3: Proportion of Enterprises Adhering to National ICT Policy by Size, Malawi 2019



Source: National Enterprise ICT Survey, 2019

8.1.3 Reasons for Not Adhering to National ICT Policy

Overall, 61.2 percent of the enterprises reported that they were not sensitized of the existence of the National ICT Policy. By enterprise size, 75.0 percent of small scale enterprises, 64.0 percent of the medium scale enterprises and 55.0 percent of the large scale enterprises were not sensitized of the existence of the National ICT Policy. About 25 percent of small scale enterprises, 24.0 percent of the medium scale enterprises and 20.0 percent of large scale enterprises reported that they were not consulted during the development of the policy (Figure 8.4).

Figure 8.4: Percent distribution of Reasons for not Adhering to National ICT Policy by Size, Malawi 2019



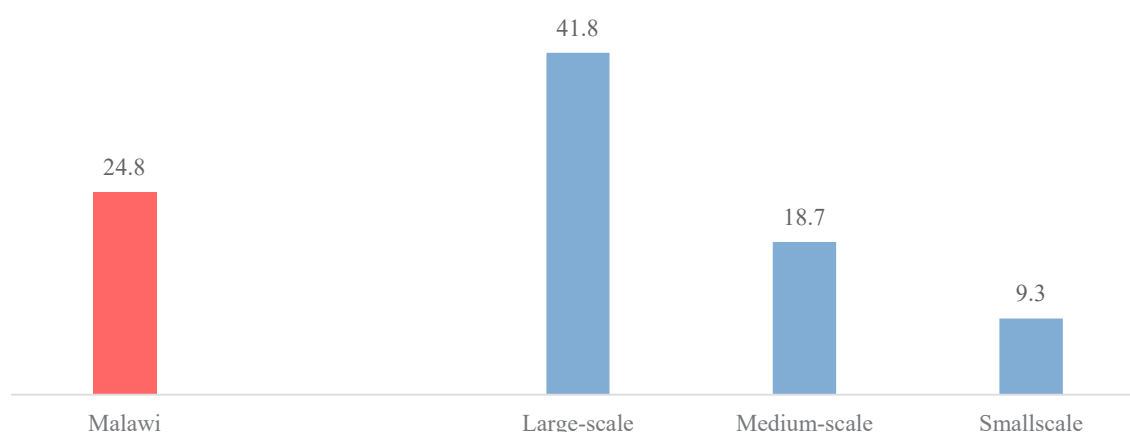
Source: National Enterprise ICT Survey, 2019

8.2 Internal Information, Communications Technologies (ICT) Policy

With the rapid developments and changes in the ICT, enterprises worldwide are developing and implementing internal ICT policies that provide frameworks and guidelines for the use and management of the enterprise's information technology capital, network, and human resources.

The results indicate that 24.8 percent of the enterprises in Malawi had an internal ICT policy in place. About 42 percent of the large scale enterprises, 18.7 percent of medium scale enterprises and 9.3 percent of small scale enterprises had internal ICT policies in place (Figure 8.5).

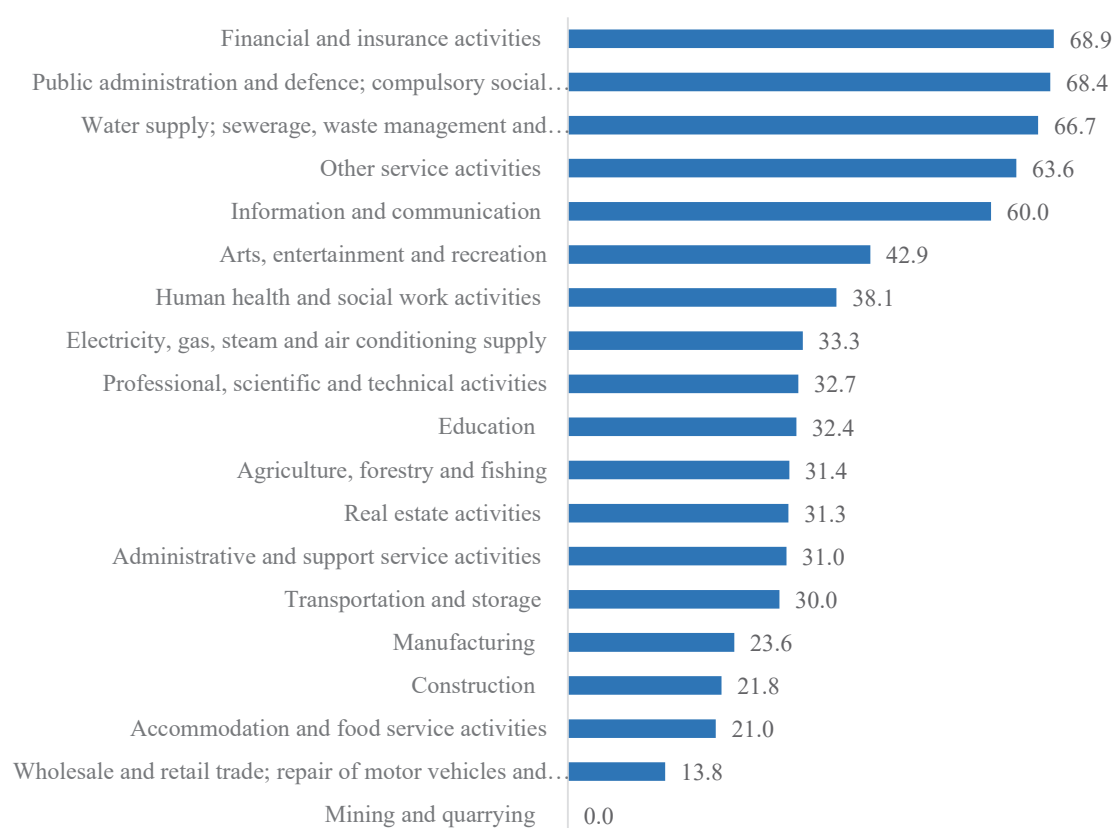
Figure 8.5: Proportion of Enterprises with Internal ICT Policies by Size, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity indicates that Financial and insurance section had the highest proportion of enterprises with internal ICT policy in place at 68.9 percent followed by Public administration and defense, compulsory; social security at 68.4 percent. The section with the lowest proportion was Wholesale and retail trade; repair of motor vehicles and motorcycles at 13.8 percent. The result also shows that almost all enterprises (0.0 percent) in Mining and quarrying section had no internal ICT policy (Figure 8.6).

Figure 8.6: Proportion of Enterprises with Internal ICT Policies by Economic Activity, Malawi 2019



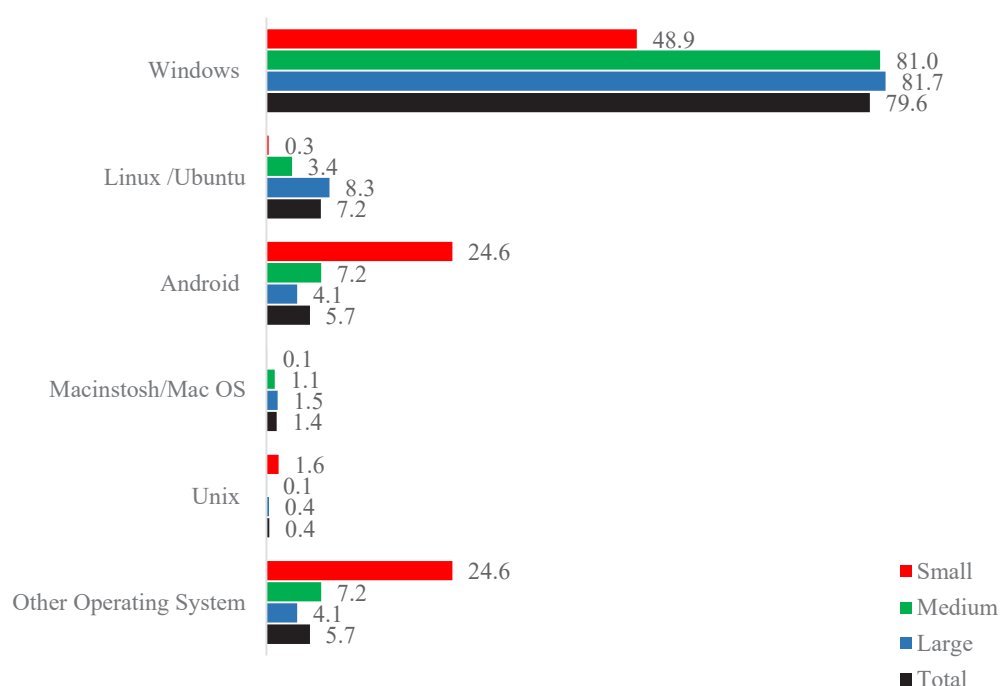
Source: National Enterprise ICT Survey, 2019

8.3 Use of Computer Operating Systems

The survey sought to establish different types of computer operating systems that the enterprises were utilizing in their respective workstations/places.

The most common computer operating system used was the Microsoft Windows at 79.6 percent while the least used computer operating system was Unix at 0.4 percent. Analysis by size of enterprises shows that 81.7 percent of large scale enterprises, 81.0 of medium scale enterprises and 48.9 percent of small scale enterprise had their computers running on Microsoft Windows. Small scale enterprises reported the highest proportion of enterprises using Android based operating system at 24.6 percent with large scale enterprises reporting the least proportion at 4.1 percent (Figure 8.7).

Figure 8.7: Proportion of Enterprises' Computers Installed with an Operating System by Size, Malawi 2019



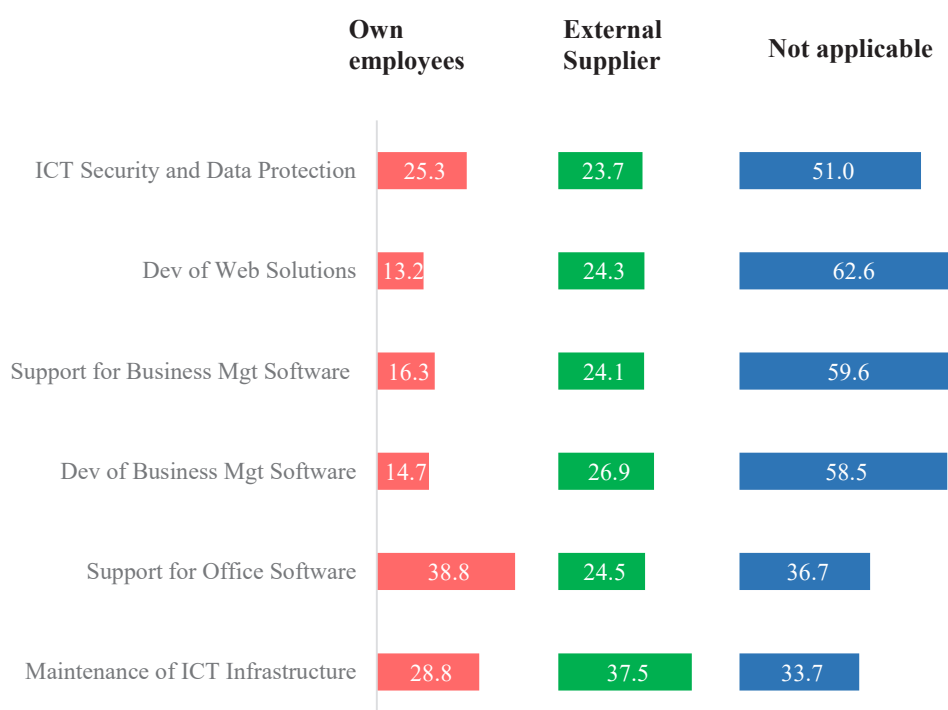
Source: National Enterprise ICT Survey, 2019

8.4 Source of ICT Functions Performed

The survey also looked at a number of key ICT functions that enterprises performed in 2019 by assessing who performed such a function.

The results show that for office software, 38.8 percent of enterprises used their own employees while 24.5 percent of enterprises used external suppliers. Regarding maintenance of ICT infrastructure, 37.5 percent of enterprises used external suppliers compared to 28.8 percent that used their own staff (Figure 8.8).

Figure 8.8: Percentage Distribution of ICT Functions Performed by Enterprises by Source of Function, Malawi 2019



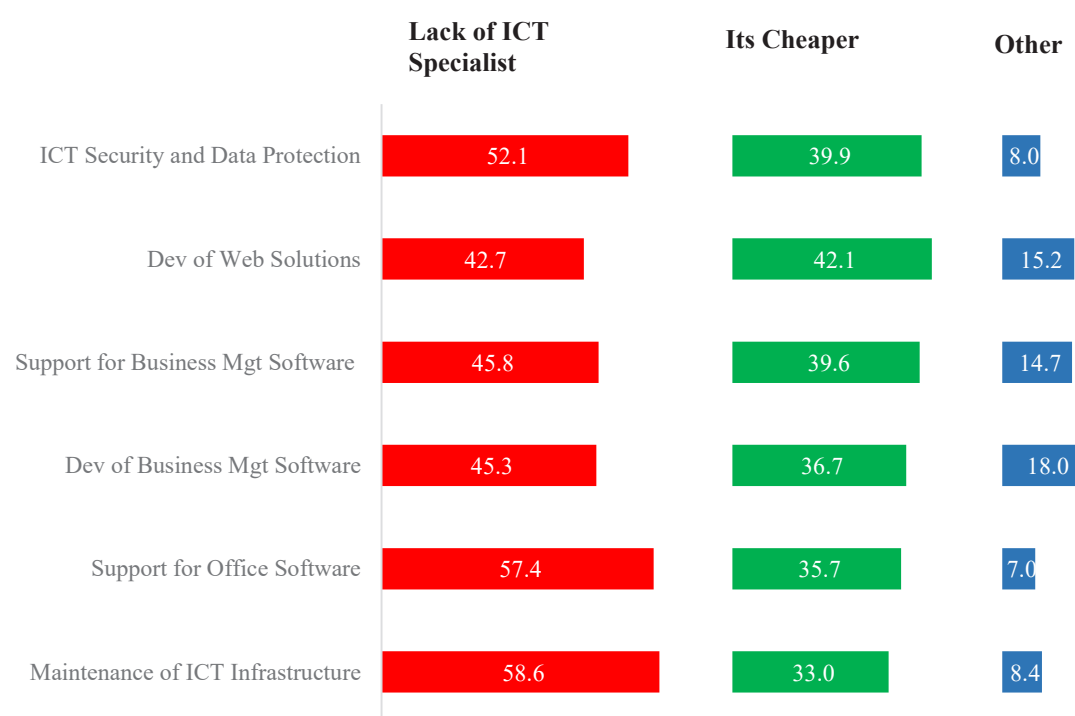
Source: National Enterprise ICT Survey, 2019

8.5 Reasons for using External Suppliers to Perform ICT Functions

The survey sought to establish why some enterprises were using external suppliers to perform their ICT functions.

About 59 percent of the enterprises cited lack of ICT specialization as the reason for the enterprises to opt for external suppliers to maintain ICT infrastructure while 33.0 percent cited that it was cheaper. Regarding support for office software, 57.4 percent of the enterprises indicated lack of ICT specialization while 37.5 percent indicated that it was cheaper (Figure 8.9).

Figure 8.9: Percent Distribution of Reasons for Using External Suppliers to Perform Enterprise ICT functions, Malawi 2019



Source: National Enterprise ICT Survey, 2019

8.6 Big Data

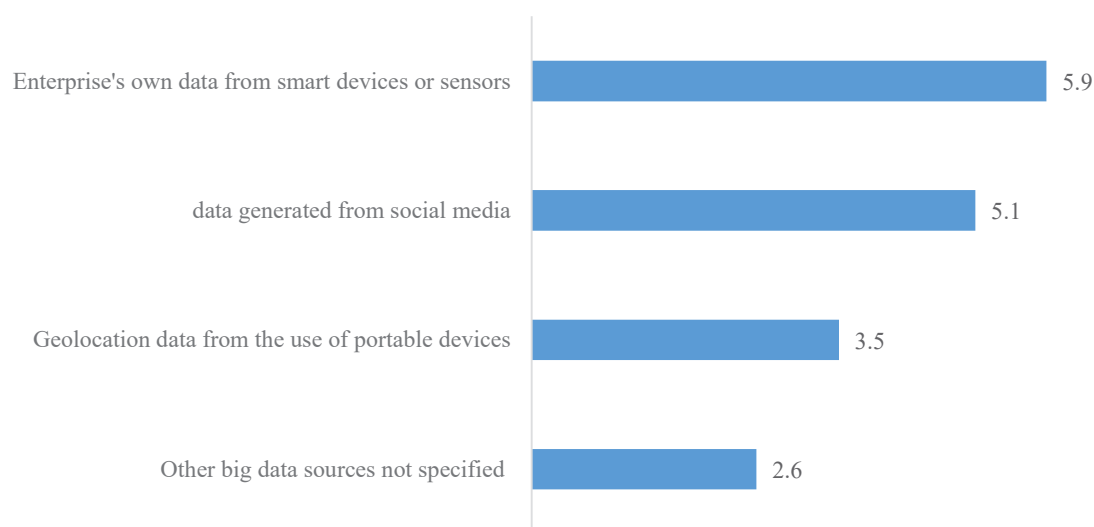
Big data: Is extremely large data sets that may be analysed computationally to reveal patterns, trends, and associations, especially relating to human behaviour and interactions.

Respondents were asked if their enterprise analysed big data in 2019 from any of the following data sources:

- i. Enterprise's own data from smart devices or sensors
- ii. Geolocation data from the use of portable devices
- iii. Data generated from social media
- iv. Other big data sources not specified above

The results show that 5.9 percent of enterprises analysed enterprise's own data from smart devices or sensors, 5.1 percent data generated from social media, 3.5 percent geolocation data from the use of portable devices and 2.6 percent other big data sources not specified (Figure 8.10).

Figure 8.10: Proportion of Enterprises by Type of Big Data Analysed during the Reference Period, Malawi 2019



Source: National Enterprise ICT Survey, 2019

8.7 Electronic Waste Disposal

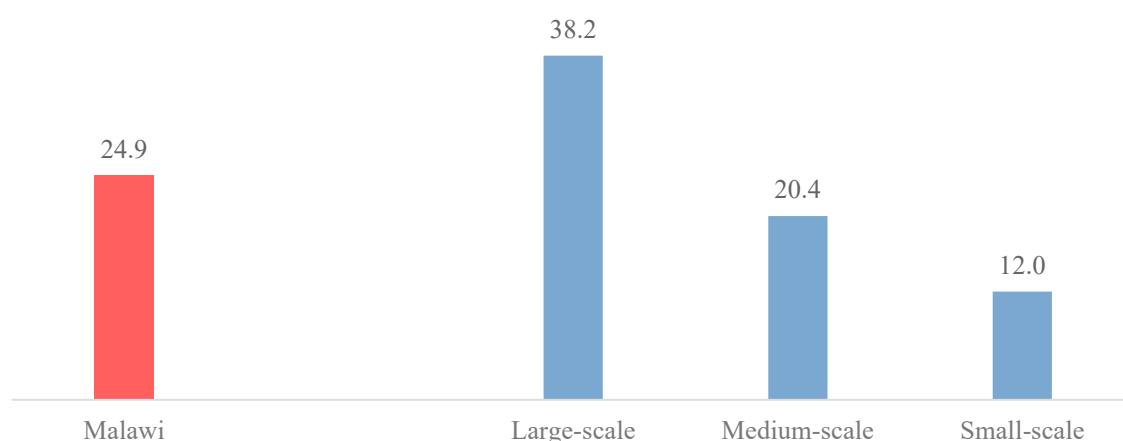
8.7.1 Awareness on Electronic Waste Disposal

The proliferation of the ICT equipment and gadgets in most developing countries tend to follow the rapid advancements of technology in the world and the increase in socio-economic development. Most developing countries in areas like Sub-Saharan Africa are net importers of both new and used ICT equipment from the developed countries. This has led to an increase in electronic waste (e-waste) as the equipment reach their life expiry due to wear and tear or obsolescence. Most African countries struggle with disposing of such waste without causing injury to the environment. As such most Governments have developed e-waste disposal regulations, guidelines or rules aimed at managing such electronic disposal which is considered to contain hazardous substances which are dangerous to both human and the environment.

Government of Malawi developed the E-Waste Management Strategy in 2019 and through the Department of Environment Affairs enforced the waste management regulations. As such, the survey sought to establish if enterprises were aware of electronic waste disposal.

The results show that 24.9 percent of all enterprises were aware of how to dispose of electronic waste. Analysis by enterprise size shows that 38.2 percent of large scale enterprises, 20.4 percent of medium scale enterprises and 12.0 percent of small scale enterprises were aware of how to dispose of the electronic waste (Figure 8.11).

Figure 8.11: Proportion of Enterprises Awareness of e-Waste Disposal by Size of Enterprise, Malawi 2019



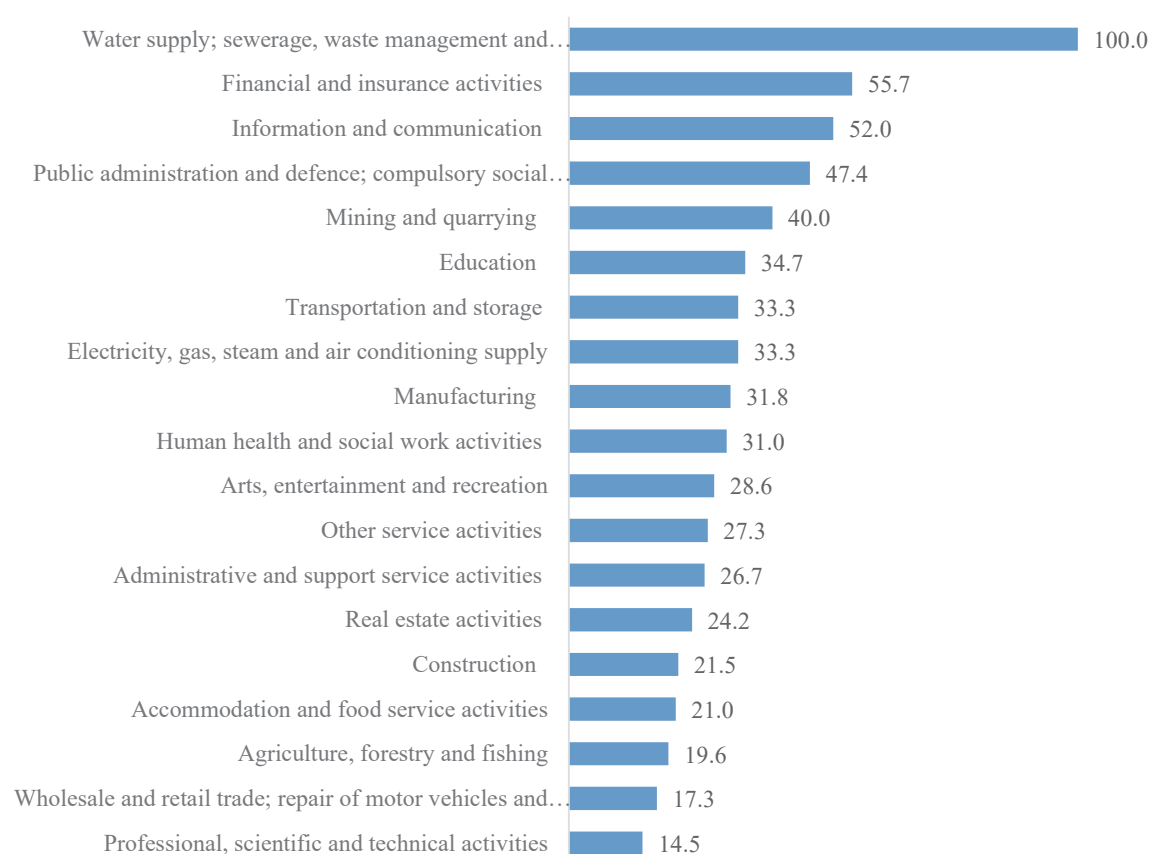
Source: National Enterprise ICT Survey, 2019

8.7.2 Disposal of e-Waste by Economic Activity

The survey findings indicate that all enterprises (100 percent) in the Water supply, sewerage, waste management and remediation activities section were aware of how e-Waste should be disposed of. About 56 percent of enterprises in the Financial and insurance section and 52.0 percent of enterprises in the Information and communication section knew how e-waste should be disposed of.

The least proportion (14.5 percent) of enterprises that knew how to dispose their e-Waste were recorded in the Professional, scientific, and technical activities sector (Figure 8.12).

Figure 8.12: Proportion of Enterprises that knew how to dispose of e-Waste by Economic Activity, Malawi 2019

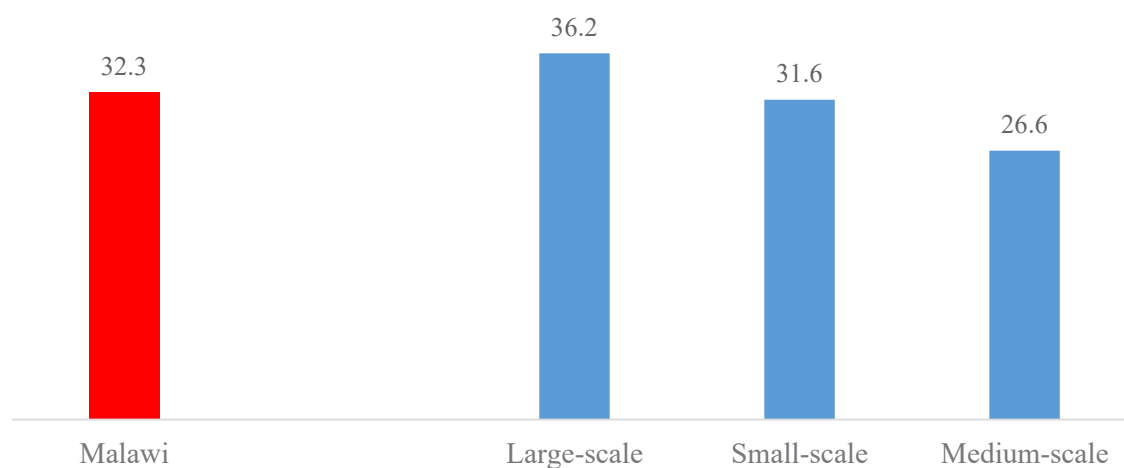


Source: National Enterprise ICT Survey, 2019

8.7.3 E-Waste Management Policy

The survey results indicate that 32.3 percent of the enterprises reported to have an e-waste management policy in place which they were following in disposing of the obsolete or damaged electronic equipment or items. Analysis by enterprise size shows that 36.2 percent of large scale enterprises, 31.6 percent of small scale enterprises and 26.6 percent of medium scale enterprises reported to have an e-waste policy (Figure 8.13).

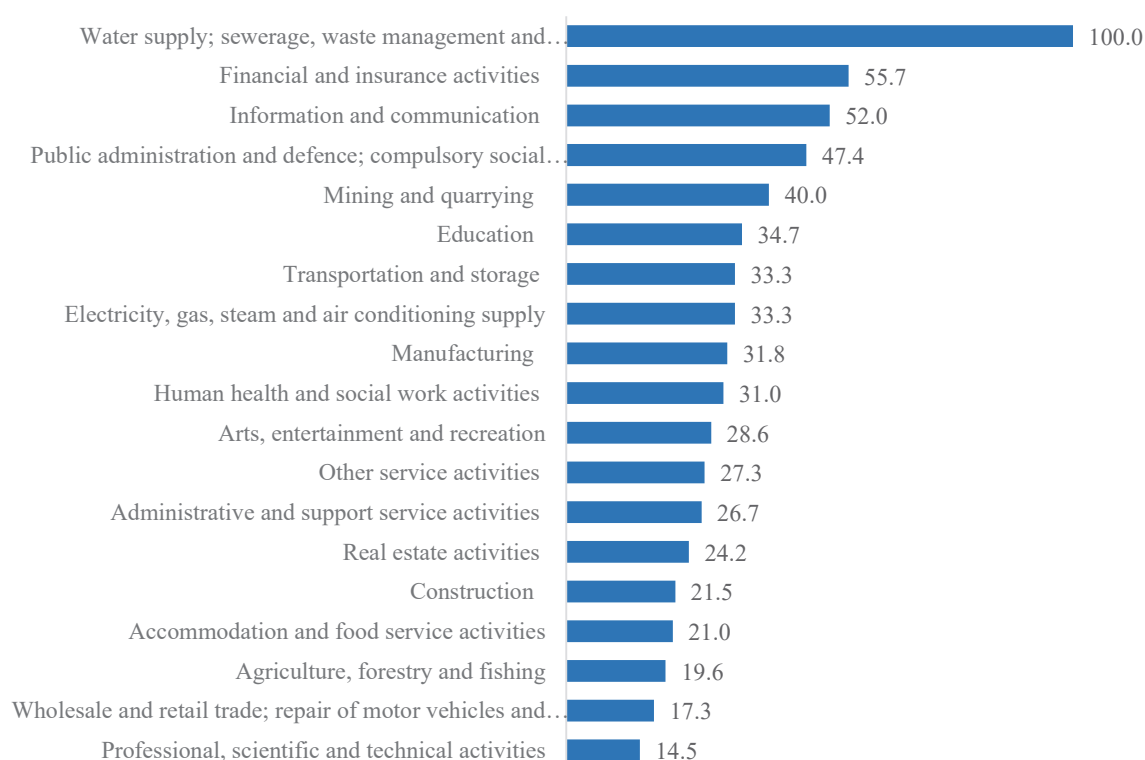
Figure 8.13: Proportion of Enterprises with an e-Waste Management Policy, Malawi 2019



Source: National Enterprise ICT Survey, 2019

Analysis by economic activity shows that all enterprises (100 percent) in Water, sewerage, water management and remediation activities section 55.7 percent of enterprises in the Financial and insurance activities and 52.0 percent of enterprises in the Information and communication section had an e-Waste management policy. About 14.5 percent of enterprises in the Professional, scientific, and technical activities section reported to have an e-waste management policy (Figure 8.14).

Figure 8.14: Proportion of Enterprises with an e-Waste Management Policy by Economic Activity, Malawi 2019



Source: National Enterprise ICT Survey, 2019

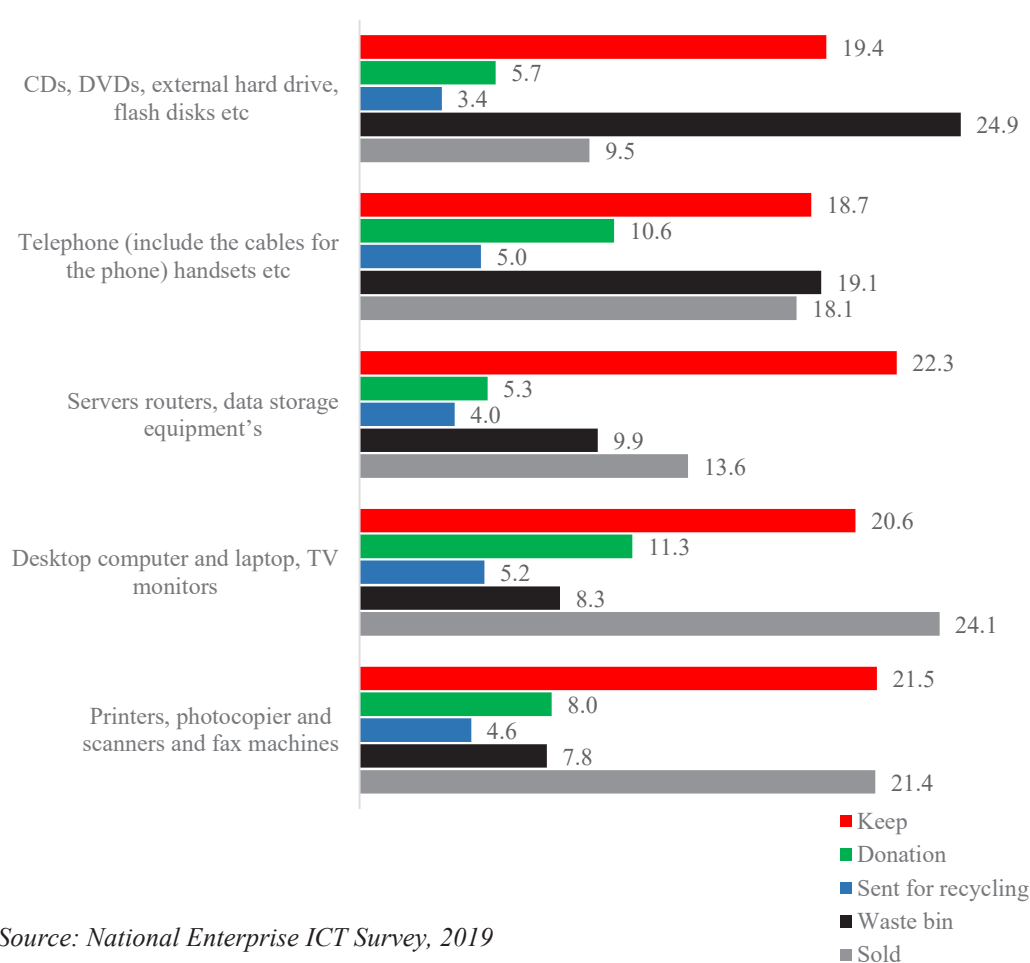
8.7.4 Disposal of Unwanted or Obsolete ICT Equipment

The survey findings indicate that the highest proportion of enterprises (24.9 percent) disposed of their CDs, DVDs, external hard drive and flash disks by throwing them in waste bins followed by those that kept them at 19.4 percent. For telephone handsets and their accessories at 19.1 percent were thrown in waste bins, 18.7 percent were kept 18.1 percent were also sold.

Regarding Servers, Routers and other storage equipment, 22.3 percent were kept (not disposed) at while 13.6 percent were sold.

The results also show that for desktop and laptop computers, TV and monitors; 24.1 percent were sold and 20.6 percent were kept. (Figure 8.15).

Figure 8.15: Proportional of Enterprises Disposing Unwanted/Obsolete ICT Equipment by Size, Malawi 2019



Source: National Enterprise ICT Survey, 2019

8.8 ICT Expenditures by Service and Equipment

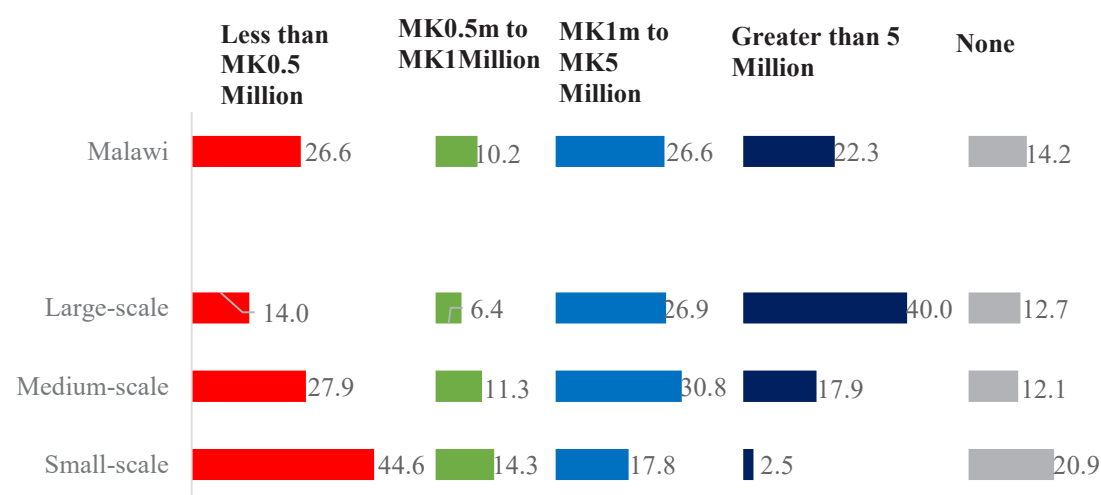
Automation of business processes in the world and Malawi in general with the aim of enhancing efficiency in performance and quality output has resulted in increased expenditure towards ICT related expenses such as equipment and software. Report by the World Bank (ICT Competitiveness in Africa, 2012) indicates that spending on ICT in Africa was in line with the global average with a considerable variation across countries and a contribution of around 7 percent of the continent's GDP. This has led to an increase in the resources allocated to ICT related equipment and items. The survey aimed at establishing the amount of resources that the enterprises were allocating towards acquiring ICT related equipment and software in 2019.

8.8.1 ICT Expenditure by Category of Expenditure and Size of Enterprises

Overall, 26.6 percent of the enterprises spent less than MK500,000 and another 26.6 percent spent above MK1,000,000-MK5,000,000 followed by 22.3 percent that spent more than MK5,000,000. About 14 percent of the enterprises did not spend any money on ICT in the reference period (2019).

By size of the enterprise, 40.0 percent of large-scale enterprises, 17.9 percent of the medium scale enterprises and 2.5 percent of the small scale enterprises spent more than MK5, 000,000 during the reference period (Figure 8.16).

Figure 8.16: Proportion of Enterprises that spent on ICT by Expenditure Category and by Size of Enterprise, Malawi 2019

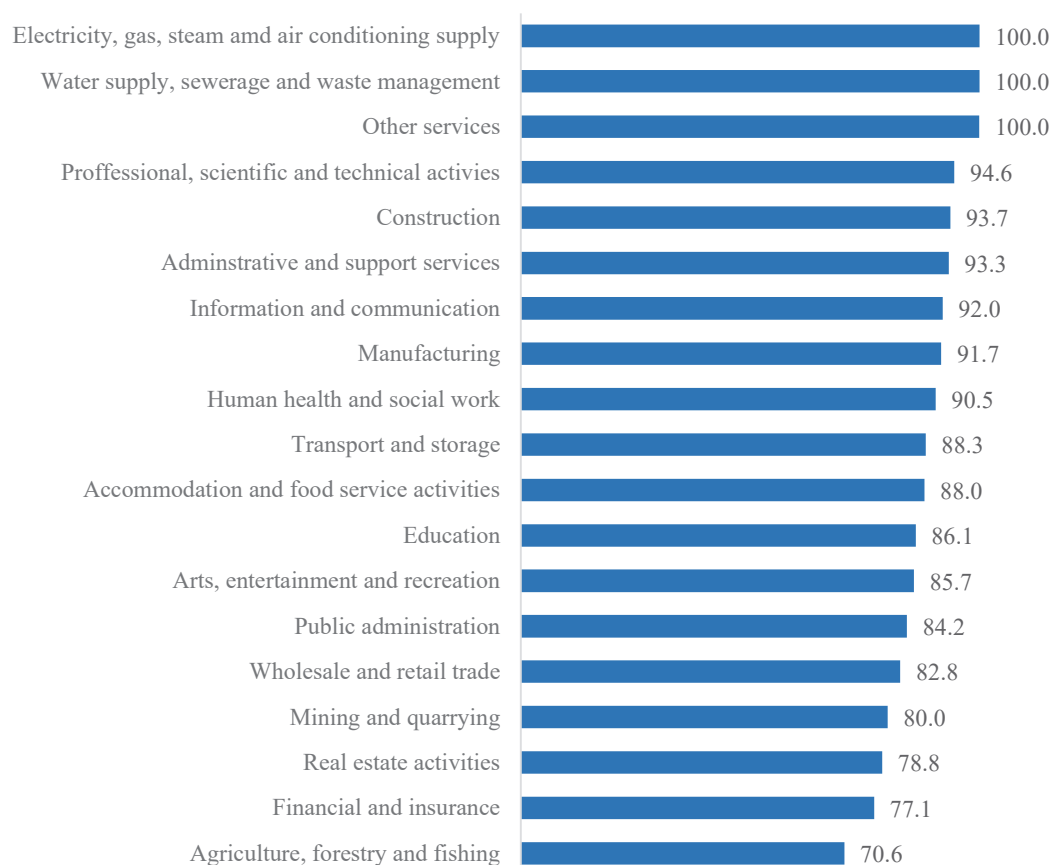


Source: National Enterprise ICT Survey, 2019

8.8.2 ICT Expenditure by Economic Activity

In 2019, all enterprises (100 percent) in Electricity, gas, steam and air conditioning supply; Water supply, sewerage and waste management and Other services spent some money on ICT. These were followed by Professional, scientific and technical activities at 94.6 percent, Construction at 93.7 percent and Administrative and support services section at 93.3 percent. Out of all enterprises in the Agriculture, forestry and fishing, 70.6 percent reported ICT expenditures (Figure 8.17).

Figure 8.17: Proportion of Enterprises that Spent on ICT by Economic Activities, Malawi 2019

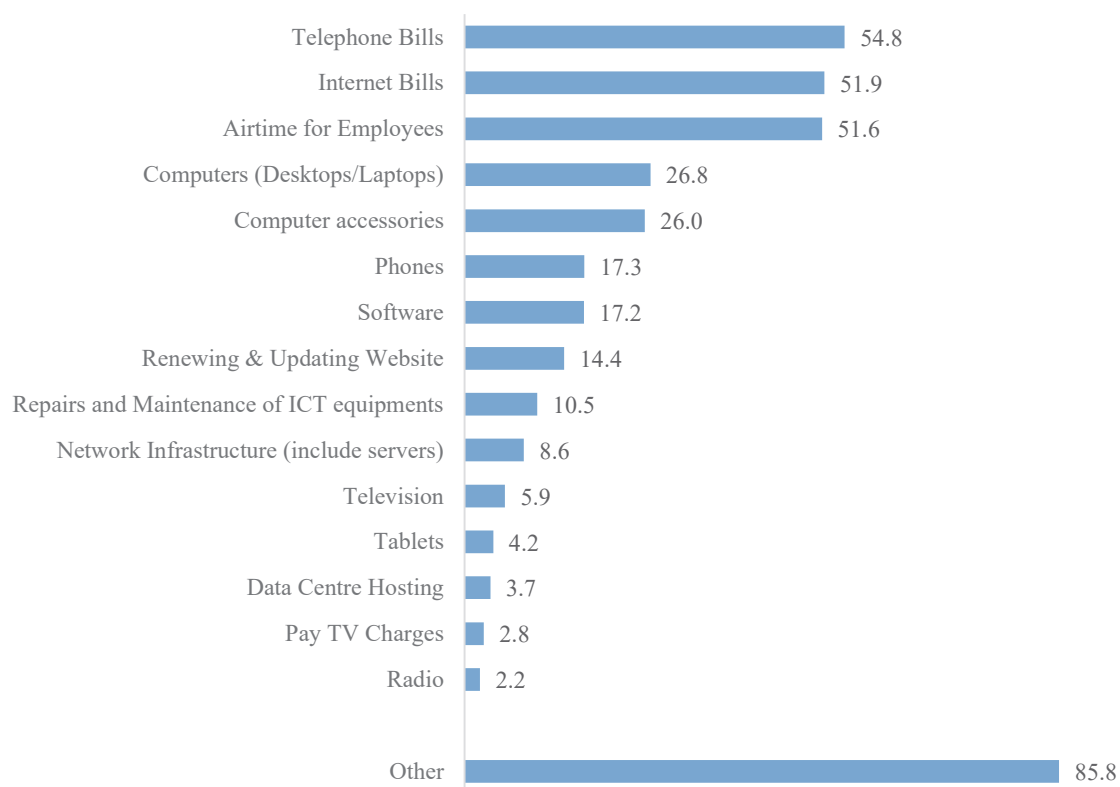


Source: National Enterprise ICT Survey, 2019

8.8.3 ICT Expenditure by Type of Expenditure

Overall, 54.8 percent of the enterprises spent their money on telephone bills, 51.9 percent on internet bills and 51.6 percent on airtime for employees. About 27 percent of the enterprises spent their money on computers (desktops/ laptops) and 26.0 percent on computer accessories (Figure 8.18).

Figure 8.18: Proportion of Enterprises that Spent on ICT by Type of Expenditure, Malawi 2019



Source: National Enterprise ICT Survey, 2019

A1.1 Survey Design

The Enterprise ICT survey drew its sample frame from the results of the Census of the Economic Activities 2019- 2019. A total of 3289 enterprises that responded to the Census constituted the frame of the survey. A representative sample size of 1,700 enterprises was drawn to represent all sectors of the economy. Classification of size of enterprises was based on their annual turnover. All businesses with turnover of less than MK50 million were classified as small while those with turnover of MK50 million to less than MK500 million were classified as medium. All businesses with MK500 million turnover and above were considered large enterprises.

The sampling design used two strata. The first stratum was a certainty stratum where no sampling took place. All enterprises with an annual turnover of MK200 million were chosen with certainty. Choosing sample units with certainty is a way of controlling the standard errors of the resulting estimates. Variability in sample-to-sample estimates due to the inclusion or exclusion of large units is removed because certainty units are included in every sample. Using the method above slightly over a thousand businesses were sampled with certainty and the rest (about 590) were chosen using Stratified probability proportion to size (SPPS). This stratum considered (ISIC and Turnover).

Table 2.1: Number of Sampled Enterprises by Broad Economic Activity, Malawi 2019

ISIC Section	ISIC Sections	Description	Number of Firms
Total			1,700
A	01 - 03	Agriculture, forestry and fishing	65
B	05 - 09	Mining and quarrying	5
C	10 -33	Manufacturing	221
D	35	Electricity, gas, steam and air conditioning supply	3
E	36 - 39	Water supply; sewerage, waste management and remediation activities	6
F	41 - 43	Construction	94
G	45 - 47	Wholesale and retail trade; repair of motor vehicles and motorcycles	694
H	49 -53	Transportation and storage	76
I	55 - 56	Accommodation and food services activities	104
J	58 - 63	Information and communication	28
K	64 - 66	Financial and insurance activities	77
L	68	Real estate activities	44
M	69 - 75	Professional, scientific and technical activities	71
N	77 - 82	Administrative and support service activities	34
O	84	Public administration and defense; compulsory social security	31
P	85	Education	76
Q	86 - 88	Human health and social work activities	46
R	90 - 93	Arts, entertainment and recreation	10
S	94 - 96	Other services activities	15

Source: National Enterprise ICT Survey 2019

A1.2 Research Tools Development

Development of survey tools took place between 10 and 15 September 2019. A technical team from National Statistical Office (NSO), Malawi Communications and Regulatory Authority (MACRA), Ministry of Information, Civic education and Communication Technology and the Department of e-Government developed data collection instruments comprising of the questionnaire and survey manual. The questionnaire consisted of nine modules on all aspects of information technology as follows:

- Front page: General information about the enterprise, background, objectives and Employment status.
- Module A: Use of Telephone
- Module B: Use of Computers and other devices
- Module C: Use of Internet
- Module D: Intranet and Extranet
- Module E: Website
- Module F: Cloud Computing
- Module G: E- Commerce
- Module H: Cyber Security
- Module I: Internet of Things (IoT)

Module J:	Big Data
Module K:	Postal services
Module L:	ICT Expenditures
Module M:	ICT Management
Module N:	ICT Waste Disposal

A1.3 Fieldwork Organization and Data Collection

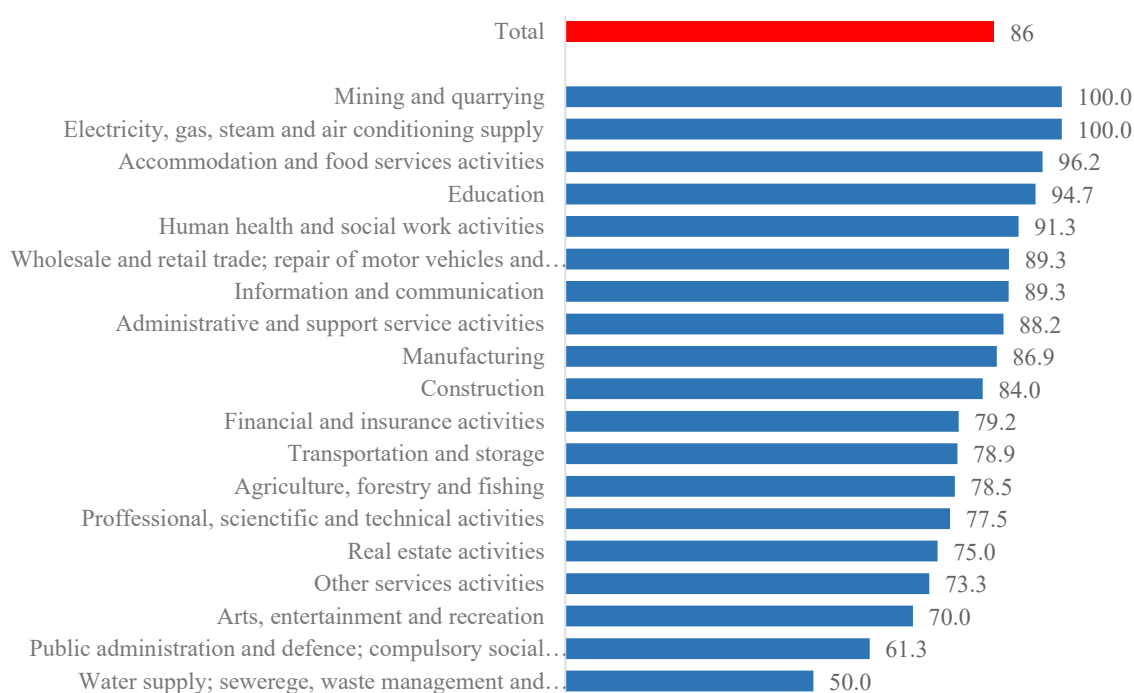
Field work started with training of 57 field personnel that consisted of 40 Research Assistants (RAs), 10 team leaders, 3 reserve Research Assistants and 4 data entry clerks. The training took place at Mandevu Farm in Machinga from 21st October to 26th October 2019.

Ten (10) field teams were used, =each team consisted of four Research Assistants, one supervisor and a driver. Because most businesses are in cities, majority of the teams worked in the four cities (Blantyre, Lilongwe, Mzuzu and Zomba) and at times also visited the districts. The teams were answerable to the Survey coordinators.

Data was collected using paper questionnaires. These paper questionnaires were used because some business managers would not be able to give answers to the interviewer right away since they would require referring to several other documents that may not be readily available. Secondly, the Managers would want to fill the questionnaires at their convenient time. In some cases, a direct face to face interviews were possible.

Fieldwork commenced on 28th October 2019 and lasted for 45 days. The survey achieved an 86.4 percent response rate with Mining and Quarrying and Electricity, gas, steam and air conditioning supply sectors achieving a 100 percent response rate (Annex 1 Figure 1.1).

Figure A 1.1: Response Rate by Economic Activity, Malawi2019



Source: National Enterprise ICT Survey 2019

A1.4 Data Processing, Cleaning and Analysis

Data processing started with a training of Data entry clerks that took place in November 2019 two weeks after data collection started. Data entry used a Census and Survey Processing software (CSpro) version 7.1. Data cleaning, validation, quality control and tabulation took place in February 2020 and used Stata software. Report writing took place in March 2020.

ANNEX 2: SELECTED SUMMARY TABLE

Table A2.1: Proportion of Enterprises with a Dedicated Mobile Telephone for Official use by Size and Economic Activity, Malawi2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	64.7	53.8	61.5	91.7
B	Mining and quarrying	80.0	100.0	75.0	-
C	Manufacturing	76.6	85.2	69.2	69.2
D	Electricity, gas, steam and air conditioning supply	66.7	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	0.0	100.0
F	Construction	79.7	74.2	82.5	87.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	73.9	72.8	74.7	73.5
H	Transportation and storage	75.0	61.5	79.2	100.0
I	Accommodation and food service activities	85.0	73.3	85.7	88.4
J	Information and communication	76.0	77.8	66.7	100.0
K	Financial and insurance activities	72.1	60.7	81.5	83.3
L	Real estate activities	60.6	30.0	75.0	66.7
M	Professional, scientific and technical activities	67.3	78.6	63.0	64.3
N	Administrative and support service activities	76.7	77.8	62.5	100.0
O	Public administration and defense; compulsory social security	47.4	57.1	25.0	0.0
P	Education	69.4	65.2	72.7	68.8
Q	Human health and social work activities	76.2	73.7	71.4	81.3
R	Arts, entertainment and recreation	85.7	75.0	100.0	100.0
S	Other service activities	54.5	75.0	33.3	50.0

Table A2.2: Proportion of Enterprises that Received Orders via Mobile Telephone by Size and Economic Activity, Malawi2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	78.8	78.6	100.0	63.6
B	Mining and quarrying	50.0	0.0	66.7	0.0
C	Manufacturing	85.0	80.0	92.6	83.3
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	0.0	100.0
F	Construction	81.0	87.0	78.8	71.4
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	81.0	80.6	81.4	80.7
H	Transportation and storage	93.3	93.8	94.7	90.0
I	Accommodation and food service activities	91.8	100.0	86.1	94.7
J	Information and communication	63.2	57.1	62.5	75.0
K	Financial and insurance activities	61.4	52.9	63.6	80.0
L	Real estate activities	65.0	33.3	73.3	50.0
M	Professional, scientific and technical activities	70.3	45.5	88.2	66.7
N	Administrative and support service activities	91.3	85.7	100.0	100.0
O	Public administration and defense; compulsory social security	77.8	75.0	100.0	0.0
P	Education	68.0	53.3	75.0	72.7
Q	Human health and social work activities	65.6	57.1	80.0	69.2
R	Arts, entertainment and recreation	50.0	33.3	50.0	100.0

S	Other service activities	33.3	66.7	0.0	0.0
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Table A2.3: Proportion of Enterprises that Placed Orders via Mobile Telephone by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	81.8	78.6	100.0	72.7
B	Mining and quarrying	50.0	0.0	66.7	0.0
C	Manufacturing	74.1	68.0	81.5	77.8
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	0.0	100.0
F	Construction	66.7	69.6	60.6	85.7
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	71.0	70.1	74.3	65.8
H	Transportation and storage	73.3	75.0	73.7	70.0
I	Accommodation and food service activities	74.1	90.9	77.8	65.8
J	Information and communication	57.9	71.4	50.0	50.0
K	Financial and insurance activities	54.5	41.2	63.6	60.0
L	Real estate activities	70.0	33.3	73.3	100.0
M	Professional, scientific and technical activities	54.1	45.5	70.6	33.3
N	Administrative and support service activities	65.2	64.3	80.0	50.0
O	Public administration and defense; compulsory social security	66.7	62.5	100.0	0.0
P	Education	56.0	66.7	58.3	36.4
Q	Human health and social work activities	71.9	71.4	60.0	76.9
R	Arts, entertainment and recreation	50.0	33.3	50.0	100.0
S	Other service activities	66.7	100.0	0.0	50.0

Table A2.4 Proportion of Enterprises that Had Bill Payment Account by Size and Economic Activity, Malawi 2019

Code		Total	Large	Medium	Small
A	Agriculture, forestry and fishing	41.7	100.0	25.0	33.3
B	Mining and quarrying	50.0		50.0	0.0
C	Manufacturing	32.8	25.0	38.5	33.3
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	30.8	30.0	33.3	20.0
F	Construction	45.1	42.1	48.0	42.9
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	16.1	30.0	12.5	0.0
H	Transportation and storage	46.3	50.0	35.7	52.0
I	Accommodation and food service activities	66.7	100.0	33.3	100.0
J	Information and communication	44.4	33.3	60.0	50.0
K	Financial and insurance activities	66.7	100.0	50.0	0.0
L	Real estate activities	27.8	16.7	50.0	16.7
M	Professional, scientific and technical activities	10.0	16.7	0.0	0.0
N	Administrative and support service activities	33.3	42.9	0.0	0.0
O	Public administration and defense; compulsory social security	44.0	40.0	46.2	42.9
P	Education	57.1	50.0	33.3	71.4
Q	Human health and social work activities	100.0	100.0	0.0	0.0

R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	39.5	36.8	40.5	40.3

Table A2.5: Proportion of Enterprises that had Till/Merchant Number Code by Size and Economic Activity, Malawi 2019

Code		Total	Large	Medium	Small
A	Agriculture, forestry and fishing	16.7	50.0	25.0	0.0
B	Mining and quarrying	0.0		0.0	0.0
C	Manufacturing	10.3	10.0	7.7	16.7
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	0.0	0.0	0.0	0.0
F	Construction	8.7	21.1	9.2	1.4
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	3.2	10.0	0.0	0.0
H	Transportation and storage	7.3	0.0	7.1	8.0
I	Accommodation and food service activities	50.0	50.0	33.3	100.0
J	Information and communication	11.1	11.1	20.0	0.0
K	Financial and insurance activities	33.3	0.0	50.0	0.0
L	Real estate activities	0.0	0.0	0.0	0.0
M	Professional, scientific and technical activities	10.0	16.7	0.0	0.0
N	Administrative and support service activities	0.0	0.0	0.0	0.0
O	Public administration and defense; compulsory social security	4.0	0.0	7.7	0.0
P	Education	21.4	50.0	0.0	14.3
Q	Human health and social work activities	0.0	0.0	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	8.2	13.6	7.7	4.5

Table A2.6 Proportion of Enterprises that Had Mobile Money Platforms by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	23.5	7.7	30.8	50.0
B	Mining and quarrying	40.0	0.0	50.0	0.0
C	Manufacturing	30.2	22.7	33.3	46.2
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	33.3	50.0	0.0	0.0
F	Construction	49.4	32.3	60.0	62.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	33.2	20.7	34.9	45.2
H	Transportation and storage	51.7	38.5	66.7	50.0
I	Accommodation and food service activities	41.0	13.3	33.3	58.1
J	Information and communication	24.0	22.2	25.0	25.0
K	Financial and insurance activities	29.5	32.1	18.5	66.7
L	Real estate activities	9.1	10.0	10.0	0.0
M	Professional, scientific and technical activities	32.7	42.9	22.2	42.9
N	Administrative and support service activities	33.3	33.3	12.5	75.0
O	Public administration and defense; compulsory social security	47.4	50.0	50.0	0.0

P	Education	34.7	21.7	39.4	43.8
Q	Human health and social work activities	33.3	21.1	42.9	43.8
R	Arts, entertainment and recreation	14.3	25.0	0.0	0.0
S	Other service activities	45.5	25.0	33.3	75.0

Table A2.7 Proportion of Enterprises with Mobile Money Account by Size and Economic Activity, Malawi 2019

Code		Total	Large	Medium	Small
A	Agriculture, forestry and fishing	50.0	50.0	50.0	50.0
B	Mining and quarrying	50.0		50.0	0.0
C	Manufacturing	20.7	20.0	19.2	25.0
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	17.9	30.0	16.7	0.0
F	Construction	34.0	34.2	32.7	35.7
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	16.1	30.0	12.5	0.0
H	Transportation and storage	26.8	0.0	28.6	28.0
I	Accommodation and food service activities	66.7	100.0	33.3	100.0
J	Information and communication	16.7	22.2	20.0	0.0
K	Financial and insurance activities	100.0	100.0	100.0	0.0
L	Real estate activities	16.7	33.3	16.7	0.0
M	Professional, scientific and technical activities	20.0	16.7	0.0	33.3
N	Administrative and support service activities	11.1	14.3	0.0	0.0
O	Public administration and defense; compulsory social security	24.0	0.0	23.1	42.9
P	Education	57.1	50.0	33.3	71.4
Q	Human health and social work activities	0.0	0.0	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	28.5	28.0	26.8	31.2

Table A2.8 Proportion of Enterprises that used Mobile Banking Platforms by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	10.5	8.7	22.2	0.0
B	Mining and quarrying	0.0	0.0	0.0	0.0
C	Manufacturing	24.8	23.5	26.9	23.1
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	0.0	0.0	0.0	0.0
F	Construction	35.0	28.6	50.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	25.5	28.3	25.8	20.0
H	Transportation and storage	25.0	20.0	25.0	40.0
I	Accommodation and food service activities	16.9	15.4	14.3	22.2
J	Information and communication	16.7	14.3	22.2	0.0
K	Financial and insurance activities	30.2	31.6	31.8	0.0
L	Real estate activities	3.3	11.1	0.0	0.0
M	Professional, scientific and technical activities	37.8	50.0	33.3	37.5
N	Administrative and support service activities	45.0	41.7	42.9	100.0
O	Public administration and defense; compulsory social security	30.0	28.6	50.0	0.0
P	Education	26.1	35.3	15.0	33.3

Q	Human health and social work activities	35.7	40.0	0.0	44.4
R	Arts, entertainment and recreation	50.0	66.7	0.0	100.0
S	Other service activities	16.7	33.3	0.0	0.0

Table A2.9 Proportion of Enterprises with a Dedicated Fixed /Landline by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	23.5	38.5	15.4	0.0
B	Mining and quarrying	40.0	100.0	25.0	0.0
C	Manufacturing	49.5	59.1	46.2	26.9
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	0.0	100.0
F	Construction	48.1	54.8	45.0	37.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	41.9	59.2	42.3	20.6
H	Transportation and storage	48.3	53.8	54.2	20.0
I	Accommodation and food service activities	47.0	73.3	47.6	37.2
J	Information and communication	68.0	88.9	66.7	25.0
K	Financial and insurance activities	90.2	92.9	92.6	66.7
L	Real estate activities	66.7	60.0	75.0	33.3
M	Professional, scientific and technical activities	67.3	57.1	74.1	64.3
N	Administrative and support service activities	73.3	83.3	62.5	50.0
O	Public administration and defense; compulsory social security	73.7	78.6	75.0	0.0
P	Education	36.1	60.9	30.3	12.5
Q	Human health and social work activities	50.0	57.9	71.4	31.3
R	Arts, entertainment and recreation	14.3	25.0	0.0	0.0
S	Other service activities	45.5	50.0	66.7	25.0

Table A2.10 Proportion of Enterprises that Received orders via Dedicated fixed /landline by Economic Activity, Malawi2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	100.0	100.0	100.0	0.0
B	Mining and quarrying	50.0	0.0	100.0	0.0
C	Manufacturing	67.4	67.3	66.7	71.4
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	0.0
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	0.0	100.0
F	Construction	63.2	64.7	61.1	66.7
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	71.9	70.6	76.5	59.4
H	Transportation and storage	75.9	64.3	92.3	50.0
I	Accommodation and food service activities	87.2	90.9	85.0	87.5
J	Information and communication	47.1	37.5	50.0	100.0
K	Financial and insurance activities	61.8	65.4	60.0	50.0
L	Real estate activities	59.1	66.7	53.3	100.0
M	Professional, scientific and technical activities	64.9	62.5	65.0	66.7
N	Administrative and support service activities	72.7	66.7	80.0	100.0
O	Public administration and defense; compulsory social security	42.9	45.5	33.3	0.0

P	Education	65.4	64.3	70.0	50.0
Q	Human health and social work activities	42.9	27.3	80.0	40.0
R	Arts, entertainment and recreation	100.0	100.0	0.0	0.0
S	Other service activities	40.0	0.0	50.0	100.0

Table A2.11: Proportion of Enterprises that Placed orders via Dedicated Fixed /Landline by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	91.7	90.0	100.0	0.0
B	Mining and quarrying	50.0	0.0	100.0	0.0
C	Manufacturing	60.2	58.0	61.1	71.4
D	Electricity, gas, steam and air conditioning supply	66.7	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	0.0	100.0
F	Construction	50.0	47.1	50.0	66.7
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	61.7	60.2	67.2	46.9
H	Transportation and storage	62.1	50.0	76.9	50.0
I	Accommodation and food service activities	71.7	63.6	84.2	62.5
J	Information and communication	35.3	25.0	37.5	100.0
K	Financial and insurance activities	63.0	65.4	58.3	75.0
L	Real estate activities	66.7	80.0	60.0	100.0
M	Professional, scientific and technical activities	62.2	62.5	70.0	44.4
N	Administrative and support service activities	59.1	66.7	40.0	50.0
O	Public administration and defense; compulsory social security	46.2	40.0	66.7	0.0
P	Education	73.1	64.3	90.0	50.0
Q	Human health and social work activities	42.9	36.4	60.0	40.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	75.0	50.0	100.0	100.0

Table A2.12 Proportion of Enterprises with Dedicated Fax Number by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	18.0	28.0	15.4	0.0
B	Mining and quarrying	20.0	100.0	0.0	0.0
C	Manufacturing	17.4	21.8	16.7	4.0
D	Electricity, gas, steam and air conditioning supply	66.7	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	33.3	0.0	0.0	100.0
F	Construction	16.5	25.8	10.0	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	19.4	25.5	20.7	9.7
H	Transportation and storage	25.4	34.6	16.7	22.2
I	Accommodation and food service activities	19.2	46.7	14.6	14.0
J	Information and communication	20.8	22.2	25.0	0.0
K	Financial and insurance activities	38.3	44.4	37.0	16.7
L	Real estate activities	39.4	40.0	40.0	33.3

M	Professional, scientific and technical activities	25.9	28.6	30.8	14.3
N	Administrative and support service activities	46.7	33.3	75.0	50.0
O	Public administration and defense; compulsory social security	31.6	28.6	50.0	0.0
P	Education	8.6	18.2	3.0	6.7
Q	Human health and social work activities	19.5	27.8	14.3	12.5
R	Arts, entertainment and recreation	28.6	25.0	50.0	0.0
S	Other service activities	9.1	25.0	0.0	0.0

Table A2.13: Proportion of Enterprises that Received Orders via Dedicated Fax number by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	33.3	42.9	0.0	0.0
B	Mining and quarrying	0.0	0.0	0.0	0.0
C	Manufacturing	15.2	10.5	15.4	100.0
D	Electricity, gas, steam and air conditioning supply	50.0	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	-	0.0	100.0
F	Construction	30.8	25.0	50.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	17.5	12.8	17.2	33.3
H	Transportation and storage	20.0	22.2	0.0	50.0
I	Accommodation and food service activities	15.8	0.0	16.7	33.3
J	Information and communication	0.0	0.0	0.0	0.0
K	Financial and insurance activities	21.7	33.3	10.0	0.0
L	Real estate activities	7.7	0.0	0.0	100.0
M	Professional, scientific and technical activities	7.1	0.0	0.0	50.0
N	Administrative and support service activities	28.6	0.0	33.3	100.0
O	Public administration and defense; compulsory social security	16.7	25.0	0.0	0.0
P	Education	0.0	0.0	0.0	0.0
Q	Human health and social work activities	12.5	20.0	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	0.0	0.0	0.0	0.0

Table A2.14: Proportion of Enterprises that Placed Orders via Dedicated Fax number by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	22.2	28.6	0.0	0.0
B	Mining and quarrying	0.0	0.0	0.0	0.0
C	Manufacturing	9.1	5.3	7.7	100.0
D	Electricity, gas, steam and air conditioning supply	50.0	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	0.0	0.0	100.0
F	Construction	15.4	12.5	25.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	13.3	17.0	8.6	20.0
H	Transportation and storage	13.3	11.1	0.0	50.0
I	Accommodation and food service activities	21.1	0.0	16.7	50.0
J	Information and communication	0.0	0.0	0.0	0.0
K	Financial and insurance activities	17.4	25.0	10.0	0.0

L	Real estate activities	7.7	0.0	0.0	100.0
M	Professional, scientific and technical activities	7.1	0.0	0.0	50.0
N	Administrative and support service activities	14.3	0.0	16.7	50.0
O	Public administration and defense; compulsory social security	16.7	25.0	0.0	0.0
P	Education	0.0	0.0	0.0	0.0
Q	Human health and social work activities	0.0	0.0	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	0.0	0.0	0.0	0.0

Table A2.15: Proportion of Employees that Used a Computer Routinely by Gender and Economic Activity, Malawi 2019

Broad Economic Activity	Total	Males	Females
Financial and insurance activities	85.4	82.8	89.3
Professional, scientific and technical activities	80.6	77.0	90.8
Other service activities	68.2	62.4	85.9
Public administration and defense; compulsory social security	68.1	61.1	84.9
Electricity, gas, steam and air conditioning supply	61.1	64.9	35.4
Information and communication	46.8	43.7	70.7
Education	37.8	37.5	38.2
Real estate activities	36.9	31.6	60.5
Arts, entertainment and recreation	35.5	36.7	33.6
Water supply; sewerage, waste management and remediation activities	28.2	22.4	60.2
Human health and social work activities	28.1	29.8	26.6
Transportation and storage	26.8	23.1	54.6
Accommodation and food service activities	20.8	18.9	24.9
Wholesale and retail trade; repair of motor vehicles and motorcycles	19.8	17.6	28.2
Manufacturing	14.8	13.6	27.2
Construction	14.6	13.3	26.8
Administrative and support service activities	7.5	7.0	10.2
Mining and quarrying	5.2	4.5	11.9
Agriculture, forestry and fishing	3.6	3.7	3.4

Table A2.16: Proportion of Enterprises with Internet Connectivity by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	54.9	76.9	53.8	8.3
B	Mining and quarrying	80.0	100.0	75.0	-
C	Manufacturing	87.5	98.9	82.1	65.4
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	-	100.0
F	Construction	86.1	96.8	82.5	62.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	52.3	71.2	51.2	31.6
H	Transportation and storage	80.0	96.2	70.8	60.0

I	Accommodation and food service activities	75.0	93.3	81.0	62.8
J	Information and communication	96.0	100.0	100.0	75.0
K	Financial and insurance activities	98.4	100.0	100.0	83.3
L	Real estate activities	81.8	90.0	80.0	66.7
M	Professional, scientific and technical activities	94.5	100.0	96.3	85.7
N	Administrative and support service activities	90.0	88.9	100.0	75.0
O	Public administration and defense; compulsory social security	94.7	100.0	100.0	0.0
P	Education	73.6	95.7	75.8	37.5
Q	Human health and social work activities	78.6	100.0	100.0	43.8
R	Arts, entertainment and recreation	85.7	100.0	100.0	0.0
S	Other service activities	81.8	100.0	100.0	50.0

Table A2.17: Proportion of Enterprises that Accessed Internet at Other Places by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	8.7	0	16.7	9.1
B	Mining and quarrying	0	-	0	-
C	Manufacturing	45.8	100	50	33.3
F	Construction	18.2	0	14.3	33.3
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	15.5	20.8	13.9	15.1
H	Transportation and storage	41.7	0	57.1	25
I	Accommodation and food service activities	32	0	25	37.5
J	Information and communication	100	-	-	100
K	Financial and insurance activities	100	-	-	100
L	Real estate activities	0	0	0	0
M	Professional, scientific and technical activities	33.3	-	100	0
N	Administrative and support service activities	33.3	50	-	0
O	Public administration and defense; compulsory social security	0	-	-	0
P	Education	31.6	100	37.5	20
Q	Human health and social work activities	44.4	-	-	44.4
R	Arts, entertainment and recreation	0	-	-	0
S	Other service activities	50	-	-	50

Table A2.18: Proportion of Enterprises that Used Internet Banking by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	46.0	60.0	38.5	25.0
B	Mining and quarrying	40.0	0.0	50.0	-
C	Manufacturing	59.2	77.3	48.1	30.8
D	Electricity, gas, steam and air conditioning supply	66.7	100.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	-	100.0
F	Construction	53.2	71.0	50.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	35.8	56.0	29.1	23.5
H	Transportation and storage	56.7	80.8	50.0	10.0
I	Accommodation and food service activities	48.0	66.7	57.5	32.6

J	Information and communication	64.0	88.9	58.3	25.0
K	Financial and insurance activities	88.5	89.3	88.9	83.3
L	Real estate activities	51.5	70.0	45.0	33.3
M	Professional, scientific and technical activities	63.6	85.7	70.4	28.6
N	Administrative and support service activities	66.7	83.3	62.5	0.0
O	Public administration and defense; compulsory social security	68.4	78.6	50.0	0.0
P	Education	43.7	56.5	51.5	6.7
Q	Human health and social work activities	48.8	73.7	42.9	20.0
R	Arts, entertainment and recreation	71.4	75.0	100.0	0.0
S	Other service activities	72.7	75.0	66.7	75.0

Table A2.19: Proportion of Enterprises with a Local Area Network (LAN) by Size of Enterprises and by Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	35.3	53.8	30.8	0.0
B	Mining and quarrying	40.0	0.0	50.0	-
C	Manufacturing	50.5	70.5	34.6	30.8
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	100.0	-	0.0
F	Construction	43.0	71.0	27.5	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	23.5	45.7	17.4	8.4
H	Transportation and storage	55.0	84.6	41.7	10.0
I	Accommodation and food service activities	46.0	80.0	50.0	30.2
J	Information and communication	88.0	100.0	100.0	25.0
K	Financial and insurance activities	83.6	89.3	81.5	66.7
L	Real estate activities	63.6	90.0	55.0	33.3
M	Professional, scientific and technical activities	65.5	78.6	63.0	57.1
N	Administrative and support service activities	43.3	50.0	25.0	50.0
O	Public administration and defense; compulsory social security	78.9	92.9	50.0	0.0
P	Education	48.6	87.0	42.4	6.3
Q	Human health and social work activities	54.8	100.0	28.6	12.5
R	Arts, entertainment, and recreation	85.7	100.0	100.0	0.0
S	Other service activities	54.5	75.0	66.7	25.0

Table A2.20: Percentage of Usage of Internet by Type of Internet Activity and Economic Activity, Malawi 2019

Code	Economic Activity	Accessing other financial services	Staff training	Sending or receiving email	Telephoning over the Internet/ VoIP including videoconferencing VoIP	Use of instant messaging such as WhatsApp etc	Use of social media e.g. Facebook for work purpose	Internal or external recruitment
A	Agriculture, forestry and fishing	40.0	18.0	62.0	24.0	50.0	30.0	24.0
B	Mining and quarrying	40.0	0.0	60.0	20.0	80.0	40.0	20.0
C	Manufacturing	53.2	24.2	82.6	30.5	66.8	38.4	25.3
D	Electricity, gas, steam and air conditioning supply	66.7	66.7	100.0	66.7	100.0	66.7	66.7
	Water supply; sewerage, waste management and remediation activities	100.0	100.0	100.0	100.0	100.0	66.7	33.3
E	Construction	51.9	26.6	88.6	36.7	78.5	59.5	29.1
F	Wholesale and retail trade; repair of motor vehicles and motorcycles	30.9	14.7	55.4	18.6	50.5	27.6	12.4
G	Transportation and storage	53.3	30.0	90.0	41.7	65.0	35.0	28.3
H	Accommodation and food service activities	46.4	33.0	81.4	21.6	76.3	59.8	29.9
I	Information and communication	52.0	52.0	92.0	64.0	88.0	68.0	56.0
J	Financial and insurance activities	75.4	60.7	93.4	63.9	72.1	60.7	45.9
K	Real estate activities	51.5	48.5	69.7	36.4	60.6	45.5	33.3
L	Professional, scientific and technical activities	65.5	52.7	90.9	45.5	78.2	60.0	52.7
M	Administrative and support service activities	63.3	26.7	83.3	36.7	73.3	50.0	26.7
N	Public administration and defense; compulsory social security	68.4	57.9	94.7	89.5	73.7	73.7	52.6
O	Education	48.6	38.9	81.9	29.2	81.9	65.3	52.8
P	Human health and social work activities	61.0	29.3	85.4	29.3	73.2	48.8	36.6
Q	Arts, entertainment and recreation	57.1	14.3	100.0	28.6	71.4	28.6	42.9
R	Other service activities	4.0	18.2	100.0	45.5	100.0	54.5	18.2
S								

Table A2.20: Percentage of Usage of Internet by Type of Internet Activity and Economic Activity, Malawi 2019 (Continued)

Cod e	Economic Activity	Provi ding public servi ces	Data collect ion	Rese arch	Recei ving feedb ack from public	Purcha sing/ orderin g goods and service s	Trackin g of goods and services	Adver tising	Selli ng good s and servi ces
A	Agriculture, forestry and fishing	6.0	24.0	24.0	24.0	42.0	34.0	32.0	20.0
B	Mining and quarrying	0.0	20.0	40.0	20.0	40.0	20.0	40.0	40.0
C	Manufacturing	17.4	34.7	33.7	37.4	62.1	52.1	45.8	47.4
D	Electricity, gas, steam and air conditioning supply	33.3	0.0	66.7	100.0	66.7	66.7	100.0	66.7
E	Water supply; sewerage, waste management and remediation activities	0.0	100.0	66.7	66.7	100.0	100.0	66.7	33.3
F	Construction	15.2	36.7	41.8	43.0	60.8	45.6	44.3	31.6
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	9.6	19.0	18.8	23.0	38.4	30.9	29.1	29.2
H	Transportation and storage	23.3	35.0	35.0	38.3	56.7	65.0	45.0	40.0
I	Accommodation and food service activities	34.0	28.9	35.1	57.7	56.7	35.1	63.9	47.4
J	Information and communication	48.0	48.0	60.0	52.0	72.0	76.0	64.0	72.0
K	Financial and insurance activities	41.0	54.1	39.3	60.7	54.1	41.0	67.2	60.7
L	Real estate activities	21.2	45.5	36.4	42.4	54.5	39.4	45.5	36.4
M	Professional, scientific and technical activities	41.8	63.6	61.8	52.7	56.4	47.3	40.0	36.4
N	Administrative and support service activities	30.0	56.7	53.3	53.3	56.7	53.3	66.7	63.3
O	Public administration and defense; compulsory social security	63.2	73.7	78.9	63.2	47.4	47.4	63.2	26.3
P	Education	29.2	36.1	50.0	51.4	47.2	30.6	59.7	36.1
Q	Human health and social work activities	24.4	43.9	39.0	48.8	46.3	39.0	31.7	31.7
R	Arts, entertainment and recreation	42.9	57.1	14.3	57.1	57.1	57.1	42.9	28.6
S	Other service activities	27.3	36.4	45.5	54.5	18.2	27.3	45.5	18.2

Table A2.21: Proportion of Male Employees that used Internet by Economic Activity, Malawi 2019

Economic Activity	Less or equal to 25 %	26 to 50 %	51 to 75 %	Greater 75 %	Total
Agriculture, forestry and fishing	40.7	22.2	18.5	18.5	100.0
Mining and quarrying	25.0	0.0	25.0	50.0	100.0
Manufacturing	42.2	19.5	14.3	24.0	100.0
Electricity, gas, steam and air conditioning supply	33.3	33.3	0.0	33.3	100.0
Water supply; sewerage, waste management and remediation activities	0.0	0.0	50.0	50.0	100.0
Construction	31.8	11.1	15.9	41.3	100.0
Wholesale and retail trade; repair of motor vehicles and motorcycles	36.4	22.0	15.4	26.2	100.0
Transportation and storage	24.4	22.2	15.6	37.8	100.0
Accommodation and food service activities	43.3	31.3	11.9	13.4	100.0
Information and communication	12.5	12.5	8.3	66.7	100.0
Financial and insurance activities	8.3	18.3	20.0	53.3	100.0
Real estate activities	11.5	34.6	15.4	38.5	100.0
Professional, scientific and technical activities	10.0	18.0	18.0	54.0	100.0
Administrative and support service activities	45.8	4.2	29.2	20.8	100.0
Public administration and defense; compulsory social security	18.8	12.5	12.5	56.3	100.0
Education	26.5	26.5	14.3	32.7	100.0
Human health and social work activities	39.3	21.4	21.4	17.9	100.0
Arts, entertainment and recreation	33.3	16.7	0.0	50.0	100.0
Other service activities	0.0	11.1	11.1	77.8	100.0

Table A2.22: Proportion of Female Employees that used Internet by Economic Activity, Malawi 2019

Economic Activity	Less or equal to 25 %	26 to 50 %	51 to 75 %	Greater 75 %	Total
Agriculture, forestry and fishing	43.5	21.7	13.0	21.7	100
Mining and quarrying	50.0	0.0	0.0	50.0	100
Manufacturing	41.2	19.3	12.6	26.9	100
Electricity, gas, steam and air conditioning supply	33.3	33.3	0.0	33.3	100
Water supply; sewerage, waste management and remediation activities	0.0	0.0	33.3	66.7	100
Construction	23.5	21.6	5.9	49.0	100
Wholesale and retail trade; repair of motor vehicles and motorcycles	34.4	16.7	17.2	31.6	100
Transportation and storage	26.3	18.4	13.2	42.1	100
Accommodation and food service activities	32.3	30.7	14.5	22.6	100
Information and communication	18.2	4.6	9.1	68.2	100
Financial and insurance activities	13.8	20.7	12.1	53.5	100
Real estate activities	14.3	19.1	19.1	47.6	100
Professional, scientific and technical activities	13.3	13.3	15.6	57.8	100
Administrative and support service activities	39.1	21.7	17.4	21.7	100
Public administration and defense; compulsory social security	12.5	18.8	12.5	56.3	100
Education	22.2	31.1	11.1	35.6	100
Human health and social work activities	38.5	30.8	11.5	19.2	100
Arts, entertainment and recreation	20.0	20.0	0.0	60.0	100
Other service activities	11.1	0.0	11.1	77.8	100

Table A2.23: Proportion of Enterprises that had Intranet by Size of Enterprises and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	37.3	53.8	38.5	0.0
B	Mining and quarrying	20.0	0.0	25.0	-
C	Manufacturing	37.5	52.3	29.5	11.5
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	34.6	54.8	20.0	28.6
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	19.5	38.6	14.6	5.8
H	Transportation and storage	41.7	53.8	37.5	20.0
I	Accommodation and food service activities	27.3	53.3	28.6	16.7
J	Information and communication	60.0	88.9	50.0	25.0
K	Financial and insurance activities	68.9	75.0	63.0	66.7
L	Real estate activities	42.4	60.0	35.0	33.3
M	Professional, scientific and technical activities	47.3	64.3	51.9	21.4
N	Administrative and support service activities	40.0	55.6	25.0	0.0
O	Public administration and defense; compulsory social security	68.4	78.6	50.0	0.0
P	Education	35.2	56.5	33.3	6.7
Q	Human health and social work activities	34.1	42.1	28.6	26.7
R	Arts, entertainment and recreation	71.4	75.0	100.0	0.0
S	Other service activities	63.6	75.0	100.0	25.0

Table A2.24: Proportion of Enterprises that used Specialised Applications for Human Resource Services by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	39	34.6	23.1	0.0
B	Mining and quarrying	5	0.0	0.0	-
C	Manufacturing	159	27.3	7.7	11.5
D	Electricity, gas, steam and air conditioning supply	3	0.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	1	50.0	-	100.0
F	Construction	67	25.8	10.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	576	13.6	5.3	2.6
H	Transportation and storage	47	26.9	20.8	10.0
I	Accommodation and food service activities	90	13.3	14.3	4.7
J	Information and communication	15	66.7	33.3	0.0
K	Financial and insurance activities	31	75.0	33.3	0.0
L	Real estate activities	28	30.0	5.0	33.3
M	Professional, scientific and technical activities	40	50.0	25.9	7.1
N	Administrative and support service activities	23	33.3	12.5	0.0
O	Public administration and defense; compulsory social security	13	35.7	25.0	0.0
P	Education	60	30.4	12.1	6.3
Q	Human health and social work activities	34	31.6	14.3	6.3
R	Arts, entertainment and recreation	5	25.0	50.0	0.0
S	Other service activities	9	0.0	33.3	25.0

Table A2.25: Proportion of Enterprises that Used Extranet by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	15.7	26.9	7.7	0
B	Mining and quarrying	0	0	0	-
C	Manufacturing	16.1	21.6	10.3	15.4
D	Electricity, gas, steam and air conditioning supply	33.3	50	0	-
E	Water supply; sewerage, waste management and remediation activities	0	0	-	0
F	Construction	15.2	16.1	17.5	0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	8.2	15.2	4.6	6.5
H	Transportation and storage	21.7	23.1	20.8	20
I	Accommodation and food service activities	23	13.3	26.2	23.3
J	Information and communication	44	55.6	41.7	25
K	Financial and insurance activities	55.7	64.3	51.9	33.3
L	Real estate activities	24.2	30	25	0
M	Professional, scientific and technical activities	27.3	57.1	25.9	0
N	Administrative and support service activities	26.7	33.3	25	0
O	Public administration and defense; compulsory social security	42.1	57.1	0	0
P	Education	23.6	34.8	24.2	6.3
Q	Human health and social work activities	16.7	36.8	0	0
R	Arts, entertainment and recreation	28.6	50	0	0
S	Other service activities	27.3	50	33.3	0

Table A2.26: Percentage Usage of Systems for Placing/ Receiving Orders by Type of System and Economic Activity, Malawi 2019

Code	Economic Activity	Manual computer system	Automated computer system	None	Total
A	Agriculture, forestry and fishing	74.5	13.7	11.8	100.0
B	Mining and quarrying	100.0	0.0	0.0	100.0
C	Manufacturing	71.9	16.7	11.5	100.0
D	Electricity, gas, steam and air conditioning supply	66.7	0.0	33.3	100.0
E	Water supply; sewerage, waste management and remediation activities	66.7	33.3	0.0	100.0
F	Construction	75.9	12.7	11.4	100.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	73.2	11.8	15.0	100.0
H	Transportation and storage	63.3	26.7	10.0	100.0
I	Accommodation and food service activities	69.0	18.0	13.0	100.0
J	Information and communication	64.0	24.0	12.0	100.0
K	Financial and insurance activities	54.1	34.4	11.5	100.0
L	Real estate activities	75.8	18.2	6.1	100.0
M	Professional, scientific and technical activities	58.2	27.3	14.5	100.0
N	Administrative and support service activities	60.0	30.0	10.0	100.0
O	Public administration and defense; compulsory social security	78.9	15.8	5.3	100.0
P	Education	70.8	12.5	16.7	100.0
Q	Human health and social work activities	78.6	11.9	9.5	100.0
R	Arts, entertainment and recreation	57.1	14.3	28.6	100.0
S	Other service activities	63.6	18.2	18.2	100.0

Table A2.27: Proportion of Enterprises that had an Active Website by Size of Enterprises and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	27.5	38.5	23.1	8.3
B	Mining and quarrying	20.0	0.0	25.0	0.0
C	Manufacturing	28.6	37.5	23.1	15.4
D	Electricity, gas, steam and air conditioning supply	66.7	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	0.0	100.0
F	Construction	29.1	48.4	17.5	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	12.6	28.3	7.5	3.2
H	Transportation and storage	41.7	46.2	45.8	20.0
I	Accommodation and food service activities	47.0	53.3	54.8	37.2
J	Information and communication	84.0	100.0	91.7	25.0
K	Financial and insurance activities	65.6	82.1	63.0	0.0
L	Real estate activities	39.4	40.0	40.0	33.3
M	Professional, scientific and technical activities	41.8	71.4	40.7	14.3
N	Administrative and support service activities	50.0	55.6	62.5	0.0
O	Public administration and defense; compulsory social security	94.7	100.0	100.0	0.0
P	Education	51.4	82.6	48.5	12.5
Q	Human health and social work activities	33.3	57.9	28.6	6.3
R	Arts, entertainment and recreation	57.1	75.0	50.0	0.0
S	Other service activities	36.4	75.0	0.0	25.0

Table A2.28: Proportion Enterprises by Website Feature and Size, Malawi 2019

No	Website Feature	Total	Large	Medium	Small
1	Advertisement	69.6	66.4	74.1	71.1
2	Customer feedback	65.6	64.1	69.2	60.5
3	Product catalogues or price lists	58.9	55.0	62.2	68.4
4	Privacy policy statement	44.9	47.3	44.1	34.2
5	Personalized web page/content in the website for regular/repeated clients	37.7	34.1	44.8	31.6
6	Security policy statement	31.9	31.8	35.0	21.1
7	Provision of online after sales support	29.9	26.8	37.1	21.1
8	Privacy seal or certification	27.9	26.8	32.2	18.4
9	Facility for online payment	24.9	19.6	30.8	34.2
10	Online ordering facility for your business products	23.4	19.1	26.6	36.8
11	Possibility for visitors to customize or design the products	19.5	16.4	23.8	21.1
12	Others	7.0	9.1	4.9	2.6

Table A2.29: Proportion of Enterprises that had Business Web domain by Type of Domain and Economic Activity, Malawi 2019

Economic Activity	.mw	.com	.org	.net	other	Total
Mining and quarrying	0.0	100.0	0.0	0.0	0.0	100
Agriculture, forestry and fishing	14.3	78.6	7.1	0.0	0.0	100
Construction	21.7	78.3	0.0	0.0	0.0	100
Arts, entertainment and recreation	25.0	75.0	0.0	0.0	0.0	100
Wholesale and retail trade; repair of motor vehicles and motorcycles	15.4	68.0	5.1	7.7	3.9	100
Manufacturing	21.8	65.5	1.8	7.3	3.6	100
Accommodation and food service activities	17.0	63.8	4.3	8.5	6.4	100
Real estate activities	38.5	61.5	0.0	0.0	0.0	100
Transportation and storage	24.0	60.0	0.0	4.0	12.0	100
Education	35.1	54.1	10.8	0.0	0.0	100
Electricity, gas, steam and air conditioning supply	50.0	50.0	0.0	0.0	0.0	100
Financial and insurance activities	52.5	45.0	2.5	0.0	0.0	100
Administrative and support service activities	20.0	40.0	13.3	26.7	0.0	100
Professional, scientific and technical activities	30.4	34.8	30.4	0.0	4.4	100
Water supply; sewerage, waste management and remediation activities	66.7	33.3	0.0	0.0	0.0	100
Information and communication	57.1	33.3	0.0	9.5	0.0	100
Other service activities	25.0	25.0	50.0	0.0	0.0	100
Human health and social work activities	42.9	21.4	35.7	0.0	0.0	100
Public administration and defense; compulsory social security	22.2	16.7	44.4	11.1	5.6	100

Table A2.30: Proportion of Enterprises that had a Business E-mail Address by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	56.9	80.8	53.8	8.3
B	Mining and quarrying	80.0	100.0	75.0	-
C	Manufacturing	77.1	80.7	75.6	69.2
D	Electricity, gas, steam and air conditioning supply	66.7	100.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	-	100.0
F	Construction	84.8	87.1	87.5	62.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	51.8	65.8	54.4	30.3
H	Transportation and storage	76.7	76.9	83.3	60.0
I	Accommodation and food service activities	65.0	80.0	76.2	48.8
J	Information and communication	96.0	88.9	100.0	100.0
K	Financial and insurance activities	83.6	92.9	77.8	66.7
L	Real estate activities	78.8	90.0	70.0	100.0
M	Professional, scientific, and technical activities	81.8	85.7	96.3	50.0
N	Administrative and support service activities	86.7	88.9	87.5	75.0
O	Public administration and defense; compulsory social security	78.9	78.6	100.0	0.0
P	Education	79.2	95.7	78.8	56.3
Q	Human health and social work activities	73.8	84.2	100.0	50.0
R	Arts, entertainment, and recreation	57.1	50.0	100.0	0.0
S	Other service activities	81.8	100.0	66.7	75.0

Table A2.31: Proportion of Enterprises that Used Cloud Computing by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	11.8	23.1	0.0	0.0
B	Mining and quarrying	20.0	0.0	25.0	-
C	Manufacturing	11.5	15.9	6.4	11.5
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	15.2	25.8	10.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	8.7	17.4	5.7	3.9
H	Transportation and storage	11.7	11.5	12.5	10.0
I	Accommodation and food service activities	13.0	20.0	23.8	0.0
J	Information and communication	40.0	55.6	41.7	0.0
K	Financial and insurance activities	55.7	75.0	44.4	16.7
L	Real estate activities	15.2	20.0	10.0	33.3
M	Professional, scientific, and technical activities	20.0	35.7	18.5	7.1
N	Administrative and support service activities	23.3	22.2	37.5	0.0
O	Public administration and defense; compulsory social security	47.4	64.3	0.0	0.0
P	Education	27.8	43.5	27.3	6.3
Q	Human health and social work activities	16.7	31.6	14.3	0.0
R	Arts, entertainment, and recreation	14.3	25.0	0.0	0.0
S	Other service activities	27.3	75.0	0.0	0.0

Table A2.32: Proportion of Enterprises' Reasons for Not Using Cloud Computing Service by Economic Activity, Malawi 2019

Code	Economic Activity	Insufficient knowledge within the organization	The cost is high	Insufficient regulatory framework	Security concerns	No need	Other
A	Agriculture, forestry and fishing	40.0	24.4	17.8	11.1	44.4	8.9
B	Mining and quarrying	50.0	50.0	25.0	75.0	50.0	0.0
C	Manufacturing	35.3	22.4	14.7	23.5	50.0	5.3
D	Electricity, gas, steam and air conditioning supply	66.7	0.0	0.0	0.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	0.0	0.0	0.0	0.0	0.0	0.0
F	Construction	38.8	14.9	10.4	16.4	53.7	6.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	38.0	16.6	9.0	11.0	55.3	3.9
H	Transportation and storage	30.2	18.9	5.7	3.8	47.2	7.5
I	Accommodation and food service activities	50.6	13.8	6.9	8.0	42.5	4.6
J	Information and communication	26.7	26.7	13.3	13.3	53.3	6.7
K	Financial and insurance activities	33.3	29.6	14.8	11.1	44.4	7.4
L	Real estate activities	28.6	21.4	7.1	25.0	46.4	0.0
M	Professional, scientific and technical activities	31.8	20.5	11.4	20.5	61.4	4.5
N	Administrative and support service activities	21.7	21.7	4.3	17.4	65.2	4.3
O	Public administration and defense; compulsory social security	70.0	50.0	30.0	50.0	50.0	20.0
P	Education	30.8	17.3	5.8	11.5	51.9	1.9
Q	Human health and social work activities	42.9	28.6	17.1	22.9	25.7	11.4
R	Arts, entertainment and recreation	50.0	33.3	0.0	16.7	0.0	0.0
S	Other service activities	50.0	25.0	25.0	25.0	50.0	0.0

Table A2.33: Proportion of Enterprises that were Aware of Electronic Transaction Act by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	35.3	50.0	38.5	0.0
B	Mining and quarrying	20.0	100.0	0.0	-
C	Manufacturing	39.8	48.3	32.1	34.6
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	33.3	0.0	-	100.0
F	Construction	31.6	38.7	30.0	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	22.0	32.8	19.5	13.6
H	Transportation and storage	33.9	38.5	33.3	22.2
I	Accommodation and food service activities	38.4	53.3	40.5	31.0
J	Information and communication	60.0	77.8	50.0	50.0
K	Financial and insurance activities	62.3	71.4	59.3	33.3
L	Real estate activities	40.6	50.0	36.8	33.3
M	Professional, scientific and technical activities	46.3	35.7	50.0	50.0
N	Administrative and support service activities	40.0	44.4	37.5	25.0
O	Public administration and defense; compulsory social security	47.4	50.0	50.0	0.0
P	Education	42.9	54.5	46.9	18.8
Q	Human health and social work activities	33.3	31.6	42.9	31.3
R	Arts, entertainment and recreation	28.6	0.0	100.0	0.0
S	Other service activities	45.5	50.0	33.3	50.0

Table A2.34: Proportion of Enterprises that Placed Orders for Goods and Services online by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	31.4	34.6	38.5	16.7
B	Mining and quarrying	0.0	0.0	0.0	-
C	Manufacturing	33.9	41.6	26.9	28.0
D	Electricity, gas, steam and air conditioning supply	66.7	50.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	33.3	0.0	-	100.0
F	Construction	34.2	38.7	37.5	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	20.2	25.0	21.0	12.9
H	Transportation and storage	26.7	23.1	33.3	20.0
I	Accommodation and food service activities	26.0	40.0	33.3	14.0
J	Information and communication	48.0	44.4	58.3	25.0
K	Financial and insurance activities	31.1	35.7	25.9	33.3
L	Real estate activities	21.2	20.0	20.0	33.3
M	Professional, scientific and technical activities	32.7	50.0	33.3	14.3
N	Administrative and support service activities	40.0	44.4	50.0	0.0
O	Public administration and defense; compulsory social security	26.3	21.4	50.0	0.0
P	Education	23.6	30.4	27.3	6.3
Q	Human health and social work activities	23.8	26.3	28.6	18.8
R	Arts, entertainment and recreation	28.6	25.0	50.0	0.0
S	Other service activities	9.1	0.0	0.0	25.0

TableA2.35: Proportion of Enterprises that Placed Orders for Goods and Services Online by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	49.0	65.4	46.2	16.7
B	Mining and quarrying	60.0	100.0	50.0	-
C	Manufacturing	70.7	86.4	59.7	50.0
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	65.8	67.7	72.5	25.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	34.8	48.9	34.3	18.8
H	Transportation and storage	56.7	57.7	62.5	40.0
I	Accommodation and food service activities	39.0	66.7	45.2	23.3
J	Information and communication	88.0	88.9	100.0	50.0
K	Financial and insurance activities	60.0	63.0	63.0	33.3
L	Real estate activities	54.5	70.0	50.0	33.3
M	Professional, scientific and technical activities	47.3	57.1	55.6	21.4
N	Administrative and support service activities	66.7	66.7	62.5	75.0
O	Public administration and defense; compulsory social security	57.9	57.1	75.0	0.0
P	Education	45.1	68.2	39.4	25.0
Q	Human health and social work activities	48.8	66.7	57.1	25.0
R	Arts, entertainment and recreation	28.6	25.0	50.0	0.0
S	Other service activities	45.5	25.0	33.3	75.0

Table A2.36: Proportion of Enterprises that Received Orders for Goods and Services Online by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	49.0	61.5	53.8	16.7
B	Mining and quarrying	40.0	0.0	50.0	-
C	Manufacturing	59.4	69.3	50.0	53.8
D	Electricity, gas, steam and air conditioning supply	66.7	50.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	33.3	0.0	-	100.0
F	Construction	60.3	71.0	56.4	37.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	32.7	44.8	34.9	14.3
H	Transportation and storage	53.4	56.0	62.5	22.2
I	Accommodation and food service activities	53.5	80.0	52.4	45.2
J	Information and communication	88.0	100.0	83.3	75.0
K	Financial and insurance activities	51.7	48.1	59.3	33.3
L	Real estate activities	51.5	70.0	45.0	33.3
M	Professional, scientific and technical activities	41.8	42.9	48.1	28.6
N	Administrative and support service activities	70.0	72.2	75.0	50.0
O	Public administration and defense; compulsory social security	36.8	28.6	75.0	0.0
P	Education	41.4	59.1	39.4	20.0
Q	Human health and social work activities	29.3	55.6	14.3	6.3
R	Arts, entertainment and recreation	28.6	50.0	0.0	0.0
S	Other service activities	20.0	0.0	33.3	33.3

Table A2.37: Proportion of Enterprises' Factors that Limited Enterprises from Selling over Internet by Size of Enterprises, Malawi 2019

No	Economic Activity	Total	Large	Medium	Small
1	None	31.4	28.6	31.3	36.1
2	Business products not well suited for sale via the Internet	25.8	30.7	23.4	22.9
3	Prefer to maintain current business model, e.g. face to face interaction	23.4	22.4	23.7	24.2
4	Insufficient level of customer demand for purchasing via the Internet	18.4	18.7	19.5	15.8
5	Lack of awareness on online selling	17.8	16.1	17.7	21.0
6	Lack of skilled employees to develop, maintain or use the technology required	16.8	12.8	18.5	20.0
7	Lack of internet infrastructure	16.7	13.4	20.0	15.5
8	Security concerns	15.5	21.0	14.3	9.0
9	Privacy concerns	11.4	13.4	11.9	7.4
10	Cost of development and /or maintenance is too high	9.9	11.7	7.7	11.3
11	Not relevant as selling over the Internet is currently	8.6	10.5	8.9	5.2
12	Customers or supplier's computer systems not compatible	6.8	7.2	6.6	6.8
13	Weak legal/regulatory framework for selling over the Internet	5.1	5.6	5.6	3.6
14	Others (Specify)	3.1	3.5	2.4	3.9

Table A2.38: Proportion of Enterprises with an ICT Security Policy, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	29.4	42.3	30.8	0.0
B	Mining and quarrying	0.0	0.0	0.0	0.0
C	Manufacturing	21.9	35.2	10.3	11.5
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	0.0	100.0
F	Construction	20.3	25.8	17.5	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	12.7	24.5	8.5	6.5
H	Transportation and storage	31.7	46.2	25.0	10.0
I	Accommodation and food service activities	23.0	53.3	23.8	11.6
J	Information and communication	44.0	77.8	33.3	0.0
K	Financial and insurance activities	68.9	89.3	63.0	0.0
L	Real estate activities	39.4	70.0	30.0	0.0
M	Professional, scientific and technical activities	27.3	50.0	25.9	7.1
N	Administrative and support service activities	46.7	38.9	75.0	25.0
O	Public administration and defense; compulsory social security	63.2	71.4	50.0	0.0
P	Education	29.2	52.2	24.2	6.3
Q	Human health and social work activities	26.2	47.4	14.3	6.3
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	45.5	50.0	66.7	25.0

Table A2.39: Proportion of Enterprises that were Aware of Existence of Mw-CERT by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	5.9	11.5	0.0	0.0
B	Mining and quarrying	0.0	0.0	0.0	0.0
C	Manufacturing	11.5	12.5	11.5	7.7
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	33.3	50.0	0.0	0.0
F	Construction	8.9	9.7	7.5	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	6.3	12.0	3.9	3.9
H	Transportation and storage	18.3	23.1	12.5	20.0
I	Accommodation and food service activities	14.0	40.0	14.3	4.7
J	Information and communication	40.0	66.7	25.0	25.0
K	Financial and insurance activities	37.7	53.6	29.6	0.0
L	Real estate activities	15.2	40.0	5.0	0.0
M	Professional, scientific and technical activities	20.0	28.6	18.5	14.3
N	Administrative and support service activities	6.7	5.6	0.0	25.0
O	Public administration and defense; compulsory social security	47.4	57.1	25.0	0.0
P	Education	19.4	30.4	18.2	6.3
Q	Human health and social work activities	7.1	15.8	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	9.1	25.0	0.0	0.0

Table A2.40: Proportion of Enterprises that were Aware of the Functions of Mw-CERT by Size of Enterprises and Economic Activity, Malawi 2019

Code		Total	Large	Medium	Small
A	Agriculture, forestry and fishing	3.9	7.7	0.0	0.0
B	Mining and quarrying	0.0	0.0	0.0	0.0
C	Manufacturing	5.2	4.5	5.1	7.7
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	33.3	50.0	0.0	0.0
F	Construction	3.8	0.0	5.0	12.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	3.1	6.0	2.5	0.6
H	Transportation and storage	8.3	7.7	8.3	10.0
I	Accommodation and food service activities	8.0	26.7	7.1	2.3
J	Information and communication	36.0	55.6	25.0	25.0
K	Financial and insurance activities	27.9	42.9	18.5	0.0
L	Real estate activities	12.1	30.0	5.0	0.0
M	Professional, scientific, and technical activities	7.3	7.1	7.4	7.1
N	Administrative and support service activities	3.3	5.6	0.0	0.0
O	Public administration and defense; compulsory social security	31.6	35.7	25.0	0.0
P	Education	9.7	17.4	9.1	0.0
Q	Human health and social work activities	4.8	10.5	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	9.1	25.0	0.0	0.0

Table A2.41: Percentage of Up to date IT Security Measures Used by Size of Enterprises, Malawi 2019

No	Description	Total	Large	Medium	Small
1	None	21.7	16.2	20.5	35.9
2	Anti-virus	81.6	92.5	79.7	62.7
3	Computer password	63.2	76.1	60.0	43.2
4	Firewall	50.0	66.9	44.1	27.7
5	Anti-Spyware	46.6	61.1	41.2	28.2
6	Regular back up of data critical to your business operations	40.8	57.5	33.7	21.8
7	Spam Filter	37.8	53.6	31.5	18.6
8	Offsite data backup	35.4	49.4	29.8	18.6
9	Secured communication between clients and servers	28.6	44.2	22.1	10.9
10	Authentic software or hardware for internal users	27.5	44.2	19.9	9.6
11	Intrusion detection system	20.5	33.8	13.5	8.6
12	Authentic software or hardware for external users	20.4	34.6	13.2	7.3
13	Other	3.2	3.6	2.3	4.6

Table A2.42: Proportion of Enterprises that Experienced an Attack by a Virus by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	27.5	34.6	30.8	8.3
B	Mining and quarrying	40.0	-	50.0	-
C	Manufacturing	25.3	34.5	19.5	11.5
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	-	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	31.6	32.3	27.5	50.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	15.8	22.2	15.0	9.5
H	Transportation and storage	15.0	15.4	16.7	10.0
I	Accommodation and food service activities	22.4	53.3	17.1	16.7
J	Information and communication	30.4	12.5	36.4	50.0
K	Financial and insurance activities	19.7	21.4	22.2	-
L	Real estate activities	21.2	-	30.0	33.3
M	Professional, scientific, and technical activities	29.6	38.5	29.6	21.4
N	Administrative and support service activities	16.7	16.7	12.5	25.0
O	Public administration and defense; compulsory social security	47.4	42.9	75.0	-
P	Education	35.7	34.8	46.9	13.3
Q	Human health and social work activities	33.3	36.8	71.4	12.5
R	Arts, entertainment and recreation	14.3	25.0	-	-
S	Other service activities	27.3	50.0	-	25.0

Table A2.43: Proportion of Enterprises with a Post Office Box by Size of Enterprises and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	88.2	88.5	92.3	83.3
B	Mining and quarrying	80.0	100.0	75.0	-
C	Manufacturing	96.4	98.9	94.9	92.3
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	-	100.0
F	Construction	97.5	100.0	97.5	87.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	89.8	96.2	92.5	77.4
H	Transportation and storage	100.0	100.0	100.0	100.0
I	Accommodation and food service activities	95.0	100.0	92.9	95.3
J	Information and communication	92.0	100.0	83.3	100.0
K	Financial and insurance activities	93.4	100.0	92.6	66.7
L	Real estate activities	93.9	100.0	90.0	100.0
M	Professional, scientific and technical activities	100.0	100.0	100.0	100.0
N	Administrative and support service activities	96.7	100.0	100.0	75.0
O	Public administration and defense; compulsory social security	100.0	100.0	100.0	100.0
P	Education	98.6	100.0	100.0	93.8
Q	Human health and social work activities	95.2	100.0	100.0	87.5
R	Arts, entertainment and recreation	100.0	100.0	100.0	100.0
S	Other service activities	90.9	100.0	66.7	100.0

Table A2.44: Proportion of Enterprises that Used any Postal Service by Size of Enterprises and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	76.5	80.8	76.9	66.7
B	Mining and quarrying	60.0	100.0	50.0	-
C	Manufacturing	87.5	94.3	80.8	84.6
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	-	100.0
F	Construction	89.9	93.5	87.5	87.5
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	67.9	73.4	72.1	53.5
H	Transportation and storage	88.3	88.5	91.7	80.0
I	Accommodation and food service activities	80.0	73.3	78.6	83.7
J	Information and communication	84.0	100.0	75.0	75.0
K	Financial and insurance activities	83.6	85.7	88.9	50.0
L	Real estate activities	87.9	90.0	85.0	100.0
M	Professional, scientific and technical activities	94.5	92.9	96.3	92.9
N	Administrative and support service activities	86.7	88.9	100.0	50.0
O	Public administration and defense; compulsory social security	94.7	100.0	100.0	0.0
P	Education	94.4	100.0	93.9	87.5
Q	Human health and social work activities	85.7	94.7	85.7	75.0
R	Arts, entertainment and recreation	71.4	100.0	50.0	0.0
S	Other service activities	90.9	100.0	66.7	100.0

Table A2.45: Proportion of Enterprises that Received Orders via Post Mail by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	24.4	34.8	8.3	20.0
B	Mining and quarrying	0.0	0.0	0.0	-
C	Manufacturing	21.1	24.1	17.6	20.8
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	28.6	35.5	23.1	28.6
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	12.7	16.4	13.8	5.0
H	Transportation and storage	20.0	19.2	20.8	20.0
I	Accommodation and food service activities	10.5	13.3	7.7	12.2
J	Information and communication	30.4	55.6	20.0	0.0
K	Financial and insurance activities	35.1	28.6	40.0	50.0
L	Real estate activities	9.7	10.0	11.1	0.0
M	Professional, scientific and technical activities	27.3	21.4	37.0	14.3
N	Administrative and support service activities	27.6	33.3	12.5	33.3
O	Public administration and defense; compulsory social security	5.3	7.1	0.0	0.0
P	Education	25.4	39.1	24.2	6.7
Q	Human health and social work activities	20.0	31.6	0.0	14.3
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	10.0	25.0	0.0	0.0

Table A2.46: Proportion of Enterprises that Pressed Orders via Post Mail by Size of Enterprise and Economic Activity-, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	8.9	13.0	0.0	10.0
B	Mining and quarrying	0.0	0.0	0.0	-
C	Manufacturing	12.4	16.1	10.8	4.2
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	18.2	16.1	20.5	14.3
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	7.7	10.7	8.8	0.8
H	Transportation and storage	16.7	15.4	20.8	10.0
I	Accommodation and food service activities	6.3	13.3	5.1	4.9
J	Information and communication	8.7	11.1	10.0	0.0
K	Financial and insurance activities	21.1	14.3	24.0	50.0
L	Real estate activities	9.7	0.0	16.7	0.0
M	Professional, scientific and technical activities	10.9	7.1	14.8	7.1
N	Administrative and support service activities	24.1	22.2	25.0	33.3
O	Public administration and defense; compulsory social security	5.3	7.1	0.0	0.0
P	Education	18.3	21.7	21.2	6.7
Q	Human health and social work activities	5.0	10.5	0.0	0.0
R	Arts, entertainment and recreation	0.0	0.0	0.0	0.0
S	Other service activities	10.0	25.0	0.0	0.0

Table A2.47: Proportion of Enterprises that Used Courier Service by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	54.9	69.2	61.5	16.7
B	Mining and quarrying	80.0	100.0	75.0	-
C	Manufacturing	83.9	93.2	76.9	73.1
D	Electricity, gas, steam and air conditioning supply	100.0	100.0	100.0	-
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	-	100.0
F	Construction	83.5	90.3	85.0	50.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	61.8	78.3	60.1	45.2
H	Transportation and storage	85.0	92.3	83.3	70.0
I	Accommodation and food service activities	56.0	80.0	71.4	32.6
J	Information and communication	84.0	100.0	83.3	50.0
K	Financial and insurance activities	88.5	100.0	88.9	33.3
L	Real estate activities	66.7	90.0	55.0	66.7
M	Professional, scientific and technical activities	83.6	85.7	92.6	64.3
N	Administrative and support service activities	90.0	100.0	87.5	50.0
O	Public administration and defense; compulsory social security	84.2	92.9	75.0	0.0
P	Education	62.5	78.3	66.7	31.3
Q	Human health and social work activities	69.0	89.5	85.7	37.5
R	Arts, entertainment and recreation	85.7	100.0	100.0	0.0
S	Other service activities	100.0	100.0	100.0	100.0

Table A2.48: Proportion of Enterprises that Used Courier Service by Operator and Size of Enterprise, Malawi 2019

No.	Courier Operator	Total	Large	Medium	Small
1	DHL International Malawi Limited	57.1	65.9	54.2	39.0
2	G4S(Malawi) LTD	46.8	50.6	44.9	41.1
3	AMPEX Courier	42.1	38.6	45.8	41.8
4	FedEx Express	37.1	44.9	33.2	25.3
5	Posts Courier	34.9	38.8	33.0	28.8
6	Speed Courier	26.2	27.8	26.8	19.9
7	Air Cargo Limited	18.8	23.0	17.8	8.9
8	Postal Operator	14.4	13.8	16.2	11.0
9	Glens (Malawi)Limited-ARAMEX T/A Aramex	10.9	16.3	7.1	6.2
10	SOSOSO Courier Services	8.1	5.0	9.6	13.0
11	Skynet	6.6	7.4	6.6	4.1
12	Xerographics (UPS)	5.3	6.5	5.0	2.1
13	Kwezy Bus Courier	4.3	4.5	4.8	2.1
14	Ankolo.com	0.8	1.1	0.5	0.7

Table A2.49: Proportion of Enterprises that Spent on ICT by Economic Activity and by Expenditure Category, Malawi 2019

Code	Economic Activity	None	<MWK5 00,000	MWK50 0,000 - <MWK1 m	MWK1m - <MWK5 m	>=MWK 5m	Total expend iture
A	Agriculture, forestry and fishing	29.4	13.7	3.9	15.7	37.3	70.6
B	Mining and quarrying	20.0	20.0	20.0	40.0	0.0	80.0
C	Manufacturing	8.3	18.2	10.4	39.1	24.0	91.7
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	0.0	66.7	33.3	100.0
E	Water supply, sewerage and waste management	0.0	33.3	0.0	0.0	66.7	100.0
F	Construction	6.3	20.3	7.6	46.8	19.0	93.7
G	Wholesale and retail trade	17.3	41.1	10.7	21.9	9.0	82.8
H	Transport and storage	11.7	10.0	15.0	30.0	33.3	88.3
I	Accommodation and food service activities	12.0	20.0	13.0	29.0	26.0	88.0
J	Information and communication	8.0	4.0	12.0	28.0	48.0	92.0
K	Financial and insurance	23.0	9.8	6.6	16.4	44.3	77.1
L	Real estate activities	21.2	12.1	9.1	24.2	33.3	78.8
M	Professional, scientific and technical activities	5.5	12.7	10.9	38.2	32.7	94.6
N	Administrative and support services	6.7	13.3	6.7	30.0	43.3	93.3
O	Public administration	15.8	5.3	0.0	21.1	57.9	84.2
P	Education	13.9	26.4	8.3	15.3	36.1	86.1
Q	Human health and social work	9.5	14.3	16.7	16.7	42.9	90.5
R	Arts, entertainment and recreation	14.3	0.0	0.0	42.9	42.9	85.7
S	Other services	0.0	18.2	18.2	27.3	36.4	100.0

Table A2.50: Proportion of Enterprises that were Aware of National ICT Policy by Size of Enterprise and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	19.6	38.5	0.0	0.0
B	Mining and quarrying	20.0	100.0	0.0	-
C	Manufacturing	15.6	19.3	12.8	11.5
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	16.5	22.6	15.0	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	10.2	16.3	8.5	5.8
H	Transportation and storage	18.3	23.1	16.7	10.0
I	Accommodation and food service activities	14.0	40.0	11.9	7.0
J	Information and communication	64.0	88.9	50.0	50.0
K	Financial and insurance activities	54.1	75.0	44.4	0.0
L	Real estate activities	21.2	40.0	15.0	0.0
M	Professional, scientific and technical activities	20.0	14.3	22.2	21.4
N	Administrative and support service activities	13.3	16.7	0.0	25.0
O	Public administration and defense; compulsory social security	52.6	57.1	50.0	0.0
P	Education	31.9	52.2	30.3	6.3
Q	Human health and social work activities	26.2	52.6	14.3	0.0
R	Arts, entertainment and recreation	14.3	25.0	0.0	0.0
S	Other service activities	27.3	25.0	33.3	25.0

Table A2.51: Proportion of Enterprises that Adhered to National ICT Policy by Economic Activity, Malawi 2019

Code	Economic Activity	Yes	No	Don't Know
A	Agriculture, forestry and fishing	80.0	0.0	20.0
B	Mining and quarrying	100.0	0.0	0.0
C	Manufacturing	79.3	10.3	10.3
D	Electricity, gas, steam and air conditioning supply	100.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	0.0	0.0
F	Construction	58.3	25.0	16.7
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	68.3	12.7	19.1
H	Transportation and storage	81.8	0.0	18.2
I	Accommodation and food service activities	92.3	0.0	7.7
J	Information and communication	86.7	6.7	6.7
K	Financial and insurance activities	81.8	15.2	3.0
L	Real estate activities	100.0	0.0	0.0
M	Professional, scientific and technical activities	81.8	0.0	18.2
N	Administrative and support service activities	75.0	0.0	25.0
O	Public administration and defense; compulsory social security	90.0	0.0	10.0
P	Education	47.8	26.1	26.1
Q	Human health and social work activities	80.0	20.0	0.0
R	Arts, entertainment and recreation	100.0	0.0	0.0
S	Other service activities	100.0	0.0	0.0

Table A2.52: Proportion of Enterprises an Internal ICT Policy by Size of Enterprises and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	31.4	57.7	7.7	0.0
B	Mining and quarrying	0.0	0.0	0.0	-
C	Manufacturing	23.6	34.1	15.6	11.5
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	21.8	29.0	20.5	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	13.8	25.8	9.7	7.2
H	Transportation and storage	30.0	38.5	20.8	30.0
I	Accommodation and food service activities	21.0	46.7	19.0	14.0
J	Information and communication	60.0	77.8	50.0	50.0
K	Financial and insurance activities	68.9	92.9	59.3	0.0
L	Real estate activities	31.3	60.0	15.8	33.3
M	Professional, scientific and technical activities	32.7	50.0	40.7	0.0
N	Administrative and support service activities	31.0	35.3	37.5	0.0
O	Public administration and defense; compulsory social security	68.4	71.4	75.0	0.0
P	Education	32.4	59.1	27.3	6.3
Q	Human health and social work activities	38.1	73.7	28.6	0.0
R	Arts, entertainment and recreation	42.9	50.0	50.0	0.0
S	Other service activities	63.6	100.0	33.3	50.0

Table A2.53: Proportion of Enterprise ICT Functions by Size of Enterprise and Source, Malawi 2019

No	Functions	Sources	Total	Large	Medium	Small
1	Maintenance of ICT Infrastructure	Own employees	28.8	41.9	25.9	13.6
		External supplier	37.5	41.7	40.9	24.4
		Not applicable	33.7	16.4	33.2	62.0
2	Support for Office Software	Own employees	38.8	51.4	37.7	21.0
		External supplier	24.5	28.6	24.9	17.0
		Not applicable	36.7	20.1	37.4	62.0
3	Development of Business Management Software	Own employees	14.7	22.2	13.3	5.3
		External supplier	26.9	40.2	24.4	10.5
		Not applicable	58.5	37.6	62.3	84.3
4	Support for Business Management Software	Own employees	16.3	24.5	14.1	7.4
		External supplier	24.1	36.9	21.9	8.0
		Not applicable	59.6	38.6	64.1	84.6
5	Development of Web Solutions	Own employees	13.2	21.0	11.7	3.4
		External supplier	24.3	33.0	23.8	11.1
		Not applicable	62.6	46.0	64.5	85.5
6	ICT Security and Data Protection	Own employees	25.3	37.3	22.8	10.8
		External supplier	23.7	27.2	25.2	15.1
		Not applicable	51.0	35.5	51.9	74.1

Table A2.54: Proportion of Enterprises that were Aware of how E-Waste should be Disposed of by Size and Economic Activity, Malawi 2019

Code	Economic Activity	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	19.6	34.6	7.7	0.0
B	Mining and quarrying	40.0	100.0	25.0	0.0
C	Manufacturing	31.8	42.0	23.1	23.1
D	Electricity, gas, steam and air conditioning supply	33.3	50.0	0.0	0.0
E	Water supply; sewerage, waste management and remediation activities	100.0	100.0	0.0	100.0
F	Construction	21.5	32.3	17.5	0.0
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	17.3	29.3	14.6	7.7
H	Transportation and storage	33.3	34.6	33.3	30.0
I	Accommodation and food service activities	21.0	46.7	21.4	11.6
J	Information and communication	52.0	66.7	50.0	25.0
K	Financial and insurance activities	55.7	67.9	51.9	16.7
L	Real estate activities	24.2	30.0	25.0	0.0
M	Professional, scientific and technical activities	14.5	21.4	14.8	7.1
N	Administrative and support service activities	26.7	27.8	25.0	25.0
O	Public administration and defense; compulsory social security	47.4	64.3	0.0	0.0
P	Education	34.7	47.8	30.3	25.0
Q	Human health and social work activities	31.0	47.4	14.3	18.8
R	Arts, entertainment and recreation	28.6	50.0	0.0	0.0
S	Other service activities	27.3	25.0	33.3	25.0

Table A2.55: Proportion of Enterprises that had an e-Waste Management Policy by Economic Activity and by Size of Enterprise, Malawi 2019

Code	Economic Activities	Total	Large	Medium	Small
A	Agriculture, forestry and fishing	40.0	44.4	0.0	-
B	Mining and quarrying	0.0	0.0	0.0	-
C	Manufacturing	24.6	28.9	16.7	20.0
D	Electricity, gas, steam and air conditioning supply	0.0	0.0	-	-
E	Water supply; sewerage, waste management and remediation activities	66.7	50.0	-	100.0
F	Construction	17.6	10.0	28.6	-
G	Wholesale and retail trade; repair of motor vehicles and motorcycles	24.3	24.1	26.8	16.7
H	Transportation and storage	25.0	11.1	25.0	66.7
I	Accommodation and food service activities	52.4	71.4	44.4	40.0
J	Information and communication	30.8	50.0	16.7	0.0
K	Financial and insurance activities	50.0	63.2	28.6	100.0
L	Real estate activities	25.0	0.0	40.0	-
M	Professional, scientific and technical activities	50.0	33.3	75.0	0.0
N	Administrative and support service activities	62.5	60.0	50.0	100.0
O	Public administration and defense; compulsory social security	44.4	44.4	-	-
P	Education	44.0	72.7	10.0	50.0
Q	Human health and social work activities	30.8	44.4	0.0	0.0
R	Arts, entertainment and recreation	50.0	50.0	-	-
S	Other service activities	0.0	0.0	0.0	0.0

Table A2.56: Proportion of Enterprises that disposed Unwanted or obsolete ICT Equipment by Type of equipment, Mode of Disposal and by Size of Enterprise, Malawi 2019

No	ICT Equipment	Mode of disposal	Total	Large	Medium	Small
1	Telephone (include the cables for the phone) handsets etc	Sold	18.1	24.1	16.0	12.7
		Waste bin	19.1	21.8	18.5	16.1
		Sent for recycling	5.0	5.6	5.3	3.7
		Donation	10.6	10.4	10.5	10.8
		Keep	18.7	15.1	20.9	20.4
2	Desktop computer and laptop, TV monitors	Sold	24.1	33.4	21.4	14.2
		Waste bin	8.3	9.5	8.0	7.1
		Sent for recycling	5.2	6.0	5.9	2.5
		Donation	11.3	13.7	11.0	8.0
		Keep	20.6	16.0	23.3	22.5
3	Printers, photocopier and scanners and fax machines	Sold	21.4	32.4	17.7	10.8
		Waste bin	7.8	6.8	9.3	6.5
		Sent for recycling	4.6	5.8	4.8	2.5
		Donation	8.0	9.1	8.0	6.2
		Keep	21.5	18.0	23.5	23.2
4	Servers routers, data storage equipment's	Sold	13.6	21.2	11.0	6.5
		Waste bin	9.9	11.8	9.6	7.4
		Sent for recycling	4.0	5.2	4.3	1.2
		Donation	5.3	7.3	5.0	2.8
		Keep	22.3	18.3	24.9	23.5
5	CDs, DVDs, external hard drive, flash disks etc	Sold	9.5	12.4	9.4	5.3
		Waste bin	24.9	29.3	24.3	19.1
		Sent for recycling	3.4	4.8	3.7	0.6
		Donation	5.7	6.0	6.2	4.0
		Keep	19.4	15.6	21.4	21.3

APPENDIX 2: ENTERPRISES ICT QUESTIONNAIRE



Government of Malawi

Questionnaire number

NATIONAL STATISTICAL OFFICE
P.O. Box 333, Zomba, Tel: +2651524377,
Fax: +2651525130, website: www.nsomalawi.mw

PUBLIC SECTOR ICT SURVEY - 2019

Authority: The ICT survey is being conducted by the National Statistical Office in Malawi

Confidentiality: under the AUTHORITY of the NATIONAL STATISTICS ACT 2013 PART IV Subject to subsection (2) of the Statistics Act 2013 stipulates that no return or other information collected by the National Statistical Office for the purpose of official or other statistics that relates to a person; a household; a business; or any other organisation may be disclosed to any person. The information is therefore strictly confidential and is to be used for statistical purposes only.

Objective: The aim of this survey is to collect data concerning government ministries/departments and agencies, corporate, NGO's and large, medium and small enterprises in order to compile statistics on their usage of Information and Communication Technologies (ICT) in Malawi.

1. Name of the Institution _____
2. Business address: _____
3. Telephone (Office): _____
4. Physical location address of this establishment: _____
5. Postal Code
6. District:
7. Website: _____
8. Type of Economic Activities of this Establishment (ISIC)

9. Describe the MAIN activity of the business? _____ ISIC

10. Which category does this institution belong to as at 31st December 2018?

- | | |
|--|---|
| 1. Judiciary & Legislature..... | 2 |
| 2. Central Government | 3 |
| 3. District Council/Local Government..... | 4 |
| 4. Statutory Corporation..... | 5 |
| 5. Constitutional Commission eg. Ombudsman | 6 |
| 6. Learning institution..... | 7 |
| 7. Hospital..... | 9 |

11. Name of Enumerator: _____
12. Enumerator Code
13. Date of Interview _____
14. Name of Field Supervisor: _____
15. Supervisor Code
16. Date of Questionnaire Inspection:

Background

The Government of Malawi underlines the key contribution of Information and Communication Technologies (ICT) as pivotal towards accelerating growth of the other sectors of the economy and how it acts as enabler for poverty reduction and wealth creation for the socio-economic development of the country. This is evidenced by the emphasis Government has placed on the sector in the Malawi Growth and Development Strategy III (MGDS III) which covers the period 2017 to 2022, as a key priority area. One deliberate strategy in the national development strategy is the promoting the adoption, transfer and utilization of appropriate technologies so as to bridge the digital divide and lower the cost of communication in the country. At the same time, Government aims at providing its essential services through the e-Government platform as stipulated under strategy on developing public online services in order to increase access to information and communication services in the country. Further to this, Government continues to implement the National ICT policy, revised the Communications Act in 2016 and recently developed the National Broadband Strategy as well as draft e-Waste Management Strategy with the aim of responding to the rapid developments in the sector and to attract investors.

Specific objectives

The specific objectives of the national ICT survey will be:

1. To provide and compile baseline indicators on availability of ICT for enterprises in the country.
2. To assess and understand how government entities and private enterprises access and use ICT services.
3. Assess the use of ICT infrastructure and applications in public and private enterprises.
4. Assess existence of internal ICT policies in government/public entities and private enterprises in the country.
5. To collect and produce relevant government entities and private enterprises ICT statistics in line with ITU and WSIS indicators for international and regional comparability.
6. To determine and understand the challenges, constraints and barriers faced by enterprises in accessing and using ICT services.

1. EMPLOYMENT STATUS

Please provide the number of employees in this enterprise as at 31st December, 2018

Category	1. Male	2. Female
1. Total Employment		
Of which ICT Personnel		
<i>Employees by Qualifications</i>		
1.1. Tertiary		
1.2. Secondary		
1.3. Primary (Basic Education)		

MODULE B: USE OF COMPUTER AND OTHER DEVICES

Qno	Questions & Filters	Coding Categories	Skip Instruction										
B1	Did your enterprise use a computer for official purposes during 2019?	Yes.....1 No.....2	If No go to next module										
2. GENERAL INFORMATION ON ICT's IN THE ENTERPRISE A USE OF TELEPHONE													
Qno	Questions & Filters	Coding Categories	Skip Instruction										
A1	Did your enterprise have a dedicated mobile phone number for enterprise purpose during 2019?	Yes.....1 No.....2	If No skip to A4										
A2	Did your enterprise RECEIVE orders via mobile phone(s) during 2019?	Yes.....1 No.....2	If No skip to A3										
A2a	What proportion of orders were received using mobile phone(s) to total orders. 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	1 2 3 4											
A3	Did your enterprise place orders via mobile phone during 2019?	Yes.....1 No.....2	If No skip to A4										
A3a	What was the proportion of orders pressed via a mobile phone to total orders during 2019? 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	1 2 3 4											
A4	Did your enterprise use any of the following mobile money platforms during 2019? (Multiple response) 1. Airtel Money 2. Mpamba	<table border="1"> <thead> <tr> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> </tbody> </table>	YES	NO	1	2	1	2	if No to both skip to A4f				
YES	NO												
1	2												
1	2												
A4a	For what purpose did you use mobile money platforms during 2019? (Multiple response) 1. Bill payments..... 2. Money transfer..... € 3. Saving Money..... 4. Other (Specify).....	<table border="1"> <thead> <tr> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> </tbody> </table>	YES	NO	1	2	1	2	1	2	1	2	
YES	NO												
1	2												
1	2												
1	2												
1	2												
A4b	Did your enterprise have mobile payment account during 2019?(Multiple response) € 1. Bill payment number (escom, waterboard,dstv account numbers).. € 2. Till/Merchant number (code)..... € 3. Mobile money account (phone number)..... € 4. No (Go to A4f).....	<table border="1"> <thead> <tr> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>1</td> <td>2</td> </tr> </tbody> </table>	YES	NO	1	2	1	2	1	2	1	2	
YES	NO												
1	2												
1	2												
1	2												
1	2												

A4c	What proportion of payments were made using mobile payment account (s) to total payments during 2019? 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	1 2 3 4	
A4e	What challenges did your enterprise face when using mobile payment account (s) during 2019? (Multiple response) € 1. Poor connectivity..... € □ 2. High transaction costs..... € 3. Fraud..... € 4. Delayed transactions (sending and receiving payments)..... € 5. Delayed delivery (Bill payments).....	YES NO 1 2 1 2 1 2 1 2 1 2	
Qno	Questions & Filters	Coding Categories	Skip Instruction
A4f	Did your Enterprise use a mobile banking platform during 2019? (eg Easy mobile,FDH wallet, MO 626, 247 mobile)	Yes.....1 No.....2	If No skip to A5
A4g	What challenges did your enterprise face when using mobile banking platforms during 2019? (Multiple response) € € 1. Poor connectivity..... € □ 2. High transaction costs..... € € 3. Fraud..... € □ 4. Delayed transactions (sending and receiving payments)..... € € 5. Delayed delivery (Bill payments).....	YES NO 1 2 1 2 1 2 1 2 1 2	
A5	Did your Enterprise have a dedicated fixed/ land line during 2019?	Yes.....1 No.....2	If No skip to A6b
A6	Did your enterprise receive orders via fixed or landline during 2019?	Yes.....1 No.....2	If No skip to A6b
A6a	What was the proportion of orders received via fixed or landline to total orders during 2019? 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	1 2 3 4	
A6b	Did your enterprise place orders via fixed or landline during 2019?	Yes.....1 No.....2	If No skip to A7
A6c	What was the proportion of orders placed via fixed or landline to total orders during 2019? 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	1 2 3 4	

MODULE C: USE OF INTERNET			
Qno	Questions & Filters	CodingCategories	Skip Instruction
C1	Did the enterprise have internet connectivity as at 31st December 2019 (Connectivity Refers to an enterprise owning/having any type internet connectivity mobile phone, modem) LAN, Wifi, Fibre optic, etc	Yes.....1 No.....2	If Yes skip to C3
C2	Did the enterprise access internet for official purpose as at 31st December 2019 (Access Refers to enterprise accessing internet at any other place other than premises e.g. cyber café, other offices etc)	Yes.....1 No.....2	If No , skip to C4
C3	What proportion of employees in your enterprise routinely (at least once a week) used internet for business purposes during 2019?	Proportion of users % 	
	1. Male.....		
	2. Female.....		
C4	Did your enterprise have a Local Area Network (LAN) as at 31st December 2019?	Yes.....1 No.....2	

MODULE C: USE OF INTERNET cont.....

C 4	What type of internet connectivity and internet speed did the enterprise have as at 31st December 2019?			
	Type of Internet Access	Technology	Coding Category	InternetSpeed (MBPS)
C4.1	Fixed Internet	1. Cable modem	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6
		2. Copper line (dial-up, DSL and xDSL)	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6
		3. Fiber to the office	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6

		4. Satellite	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6
		5. Fixed wireless e.g. Wi-Max	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6
		6. Other fixed (specify)	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6
C4.2	Mobile Internet	7. Phones	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6
		8. Modem (Dongle)	Yes.....1 No.....2 If No skip to next technology	Less than 1 MBPS.....1 1 -2 MBPS.....2 3 -9 MBPS.....3 10 - 29 MBPS.....4 30 - 99 MBPS.....5 100+ MBPS.....6

Qno	Questions & Filters	Coding Categories	Skip Instruction
C5	Did your enterprise use any of the following activities of internet during 2019?	YES	NO
	1. Accessing other financial services	1	2
	2. Staff training	1	2
	3. Sending or receiving email	1	2
	4.Telephoning over the Internet/ VoIP including video conferencing VoIP	1	2
	5. Use of instant messaging such as Whats app etc	1	2
	6. Use of social media e.g. Facebook for work purpose	1	2
	7. Internal or external recruitment	1	2
	8. Providing public services	1	2
	9. Data collection	1	2
	10. Research	1	2
	11. Receiving feedback from public	1	2
	12. Purchasing/ ordering goods and services	1	2
	13. Tracking of goods and services	1	2
	14. Advertising	1	2
	15. Selling goods and services	1	2

	2. Internal company newsletter or daily news.....	1	2																	
	3. Day to day/ working documents.....	1	2																	
	4. Manuals, guides or training materials.....	1	2																	
	5. Product or services catalogues.....	1	2																	
	6. Pictures/video files.....	1	2																	
D3	Did your enterprise use specialized applications for human resource services (e.g. request annual leave via a computer programme, view or download pay slips, or other service) during 2019?	Yes.....1 No.....2																		
D4	Did your enterprise have extranet (e.g. a website or an extension of the intranet with access restricted to enterprise partners only) during 2019?	Yes.....1 No.....2																		
D5	Which one of the following systems for placing/receiving orders did the enterprise use as at 31st December 2019? 1. Manual system 2. Automated system..... 3. None	Circle one 1 → 2 3 →	Go to Module E Go to Module E																	
D6	As at 31st December 2019, was your computer systems for placing orders automatically linked with any of the following internal or external systems? 1. Your supplier's computer systems..... 2. Your enterprise computer analysis..... 3. Other internal or external computer systems (please specify).....	Circle appropriate answer YES NO 1 2 1 2 1 2																		
D7	As at 31st December 2019, was your computer systems for receiving orders automatically linked with any of the following internal or external systems? a) Your customer's computer systems..... b) Your suppliers computer systems..... c) Your enterprise computer system..... d) Other internal or external computer systems (please specify)..... e) None.....	Circle appropriate answer YES NO 1 2 1 2 1 2 1 2 1 2																		
MODULE E. WEBSITE A WEBSITE is a set of related web pages located under a single domain name. <table border="1"> <thead> <tr> <th>Qno</th><th>Questions & Filters</th><th>Coding Categories</th><th>Skip Instruction</th></tr> </thead> <tbody> <tr> <td>E1</td><td>Did your business have an active website as at 31st December 2019?</td><td>Yes.....1 No.....2</td><td>If No, Go to E8</td></tr> <tr> <td>E2</td><td>What was the website address? (e.g. www.nsomalawi.mw)</td><td></td><td></td></tr> <tr> <td>E3</td><td>What is your business's web domain? (circle only one). 1 .ac.mw..... 2 .co.mw..... 3 .gov.mw..... 4 .info.mw.....</td><td>1 2 3 4</td><td></td></tr> </tbody> </table>					Qno	Questions & Filters	Coding Categories	Skip Instruction	E1	Did your business have an active website as at 31st December 2019?	Yes.....1 No.....2	If No, Go to E8	E2	What was the website address? (e.g. www.nsomalawi.mw)			E3	What is your business's web domain? (circle only one). 1 .ac.mw..... 2 .co.mw..... 3 .gov.mw..... 4 .info.mw.....	1 2 3 4	
Qno	Questions & Filters	Coding Categories	Skip Instruction																	
E1	Did your business have an active website as at 31st December 2019?	Yes.....1 No.....2	If No, Go to E8																	
E2	What was the website address? (e.g. www.nsomalawi.mw)																			
E3	What is your business's web domain? (circle only one). 1 .ac.mw..... 2 .co.mw..... 3 .gov.mw..... 4 .info.mw.....	1 2 3 4																		

C6	Did your Enterprise use internet banking during 2019?	YES 1	NO 2
C7	What challenges did your enterprise face when using internet banking during 2019? 1 Poor connectivity..... 2 High transaction costs..... 3 Fraud..... 4 Delayed Transactions (sending and receiving payments)..... 5 Delayed delivery(Bill payments).....	YES 1 1 1 1 1 1	NO 2 2 2 2 2 2
C8	Did your enterprise seek the following e-government services during 2019? A Enquiries; Obtaining information through sending emails etc B File tax returns online i.e. itax C Registering enterprise or searched enterprise name online D Used e-procurement to apply for government tenders E Apply for a single enterprise permit F Obtaining trade licenses G Obtaining road traffic licences H Obtaining information from government website e.g. checking exchange rates in Reserve Bank of Malawi Website I Obtaining e-visa J Other (Specify)_____	YES 1 1 1 1 1 1 1 1 1 1	NO 2 2 2 2 2 2 2 2 2 2

MODULE D: INTRANET AND EXTRANET			
An intranet refers to an internal communications network using internet protocols and allowing communication within an organization (and to other authorized persons). It is typically set up behind a firewall to control access. Extranet refers to a closed network that uses Internet protocols to securely share enterprise's information with suppliers, vendors, customers or other businesses partners. It can take the form of a secure extension of an Intranet that allows external users to access some parts of the enterprise's Intranet. It can also be a private part of the enterprise's website, where business partners can navigate after being authenticated in a login page. Business Computer Analysis is For ordering or inventory control, accounting functions, production or service operations			
Qno	Questions & Filters	Coding Categories	Skip Instruction
D1	Did your enterprise have intranet as at 31st December 2019?	Yes.....1 No.....2	If No , Go to D3
D2	Did your enterprise use intranet to share the following information? 1. The general policy or strategy of the enterprise.....	YES 1 NO 2	

	5 .org.mw..... 6 .mw..... 7 .com..... 8 .org..... 9. Other Specify.....	5 6 7 8 9	
E4	Where was the enterprise website hosted as at 31st December 2019?	Locally.....1 Internationally.....2	→ (Go to E6)
E5	What were the reasons for hosting your website internationally? 1. Cheap..... 2. Security..... 3. Technical know how..... 4. Reliability..... 5. Other (Specify).....	MULTIPLE RESPONSES YES NO 1 2 1 2 1 2 1 2 1 2	
E6	As at 31st December 2019 did your business website have any of the following features? a). Product catalogues or price lists..... b). Personalized web page/content in the website for regular/repeated clients..... c). Possibility for visitors to customize or design the products..... d). Online ordering facility for your business products' e.g. shopping cart, reservations..... e) Facility for Online payment..... f) Advertisement..... g) Privacy policy statement..... h) Privacy seal or certification..... i) Security policy statement..... j) Provision of online after sales support..... k) Customer feedback..... l) Others (specify).....	Circle appropriate answers YES NO 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
E7	How often was the content in the institution's website updated? 1. Daily..... 2. Weekly..... 3. Monthly..... 4. Quarterly..... 5. Mid-year..... 6. Annually..... 7. More than a year.....	Circle appropriate answers 1 2 3 4 5 6 7	
Qno	Questions & Filters	Coding Categories	Skip Instruction
E8	Did your enterprise have a business email address as at 31st December 2019? (E.g. trade@statistics.gov.mw, info@gmail.com)	Yes.....1 No.....2	If No , Go to E10

E9	What is the email address used:		
E10	Did the enterprise use social networking websites as at 31st December 2019? (Provide address or phone number)	circle that apply	ADDRESS OR PHONE NUMBER
		YES	NO
	1. Social networking sites such as Facebook, Google+ ...	1	2
	2. Microblog sites such as Twitter.....	1	2
	3. Instant messaging such as WhatsApp.....	1	2
	4. Linked-In.....	1	2
	5. Video sites such as You tube.....	1	2
	6. Photo sites such as Flickr, Instagram etc.....	1	2
	7. Blogs such as WordPress, Blogspot etc.....	1	2
	8. Other (specify).....	1	2

MODULE F: CLOUD COMPUTING

Cloud computing is an IT development, deployment and delivery model, enabling service users to have ubiquitous, convenient, demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications), that can be rapidly provisioned and released with minimal management effort or service provider interaction. Cloud computing enables cloud services.

Qno	Questions & Filters	Coding Categories	Skip Instruction
F1	Did the enterprise use cloud computing in 2019?	Yes.....1 No.....2	If No, Go to F2
F1a	Which cloud computing services did the business use during 2019?	MULTIPLE RESPONSES YES NO a) Application hosting..... 1 2 b) Data storage 1 2 c) Email and messaging 1 2 d) Customer relationship Management 1 2 e) Server capacity 1 2 f) Application development 1 2 g) Business specific..... 1 2 h) Finance and enterprise resource planning..... 1 2 i) Desktop/office software..... 1 2 € j) Content management system/ Document management system 1 2 k) Business Intelligence..... 1 2 l) Business process manager on cloud 1 2 m) Enterprise Service Bus..... 1 2 n) Others (Specify)..... 1 2	
F1b	What were the benefits of using cloud computing services in 2019?	MULTIPLE RESPONSES YES NO	

	a) More flexibility..... b) Cost savings..... c) Better scalability..... d) Complexity reduction (Simplicity)..... e) More (Core) business focus..... f) Collaboration..... g) Better functionality..... h) Improved security..... i) Others specify).....	1 1 1 1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 2 2 2	 If any response, skip to next module
F2	Why did the business not use cloud computing in 2019? a) Insufficient knowledge within the organization..... b) The cost is high..... c) Insufficient regulatory framework..... d) Security concerns..... e) No need..... f) Other specify.....	MULTIPLE RESPONSES YES 1 1 1 1 1 1 1	NO 2 2 2 2 2 2 2	
F3	Does the business have a plan to adopt cloud computing in future? 1. No plan..... 2. Within 12 months..... 3. More than 12 months.....	<i>Circle that apply</i> 1 2 3		

MODULE G: E-COMMERCE			
Qno	Questions & Filters		Skip Instruction
G1	Is your enterprise aware of Electronic Transaction Act?	Yes.....1 No.....2	skip to G3
G2	Did your enterprise place orders (make purchases) for goods or services online during 2019? This excludes orders submitted via enterprise e-mail	Yes.....1 No.....2	
G2a	What was the the proportion of orders placed online to total orders placed during 2019? 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	1 2 3 4	
G2b	What was the main mode of delivery of the purchases made online during 2019? a) Physical delivery by supplier..... b) Pick up from point of sale..... c) Licensed Courier Company e.g. DHL, Post courier, AMPEX, minibuses..... d) Malawi Postal Corporation e) Online/electronic delivery f) Others (Specify).....	1 2 3 4 5 6	
G3	Did your enterprise place orders (make purchases) for goods or services via e-mail during 2019?	Yes.....1 No.....2	

G4	Did your enterprise receive orders (make sales) for goods or services via enterprise e-mail during 2019?	Yes.....1 No.....2	If No to G3 & G4 skip to G6																														
G5	What were the benefits of online selling/ buying during 2019?	<table border="1"> <thead> <tr> <th></th> <th>YES</th> <th>NO</th> </tr> </thead> <tbody> <tr> <td>a) Reduced transaction time</td> <td>1</td> <td>2</td> </tr> <tr> <td>b) Improved quality of customer service</td> <td>1</td> <td>2</td> </tr> <tr> <td>c) Lower enterprise costs</td> <td>1</td> <td>2</td> </tr> <tr> <td>d) Increased sales and/ or number of customers</td> <td>1</td> <td>2</td> </tr> <tr> <td>e) Keeping pace with competitors</td> <td>1</td> <td>2</td> </tr> <tr> <td>f) Able to better target customers individually</td> <td>1</td> <td>2</td> </tr> <tr> <td>g) Security</td> <td>1</td> <td>2</td> </tr> <tr> <td>h) None</td> <td>1</td> <td>2</td> </tr> <tr> <td>i) Other (specify).....</td> <td>1</td> <td>2</td> </tr> </tbody> </table>		YES	NO	a) Reduced transaction time	1	2	b) Improved quality of customer service	1	2	c) Lower enterprise costs	1	2	d) Increased sales and/ or number of customers	1	2	e) Keeping pace with competitors	1	2	f) Able to better target customers individually	1	2	g) Security	1	2	h) None	1	2	i) Other (specify).....	1	2	
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g) Security	1	2																															
h) None	1	2																															
i) Other (specify).....	1	2																															
G6	Which of the following factors, if any, limited your enterprise from selling over the internet during 2019?	MULTIPLE RESPONSES <table border="1"> <tbody> <tr> <td>a) enterprise products not well suited for sale via the Internet.....</td> <td>1</td> </tr> <tr> <td>b) Security concerns.....</td> <td>2</td> </tr> <tr> <td>c) Privacy concerns.....</td> <td>3</td> </tr> <tr> <td>d) Prefer to maintain current enterprise model, e.g. face to face interaction</td> <td>4</td> </tr> <tr> <td>e) Customers' or suppliers' computer systems not compatible</td> <td>5</td> </tr> <tr> <td>f) Insufficient level of customer demand for purchasing via the Internet...</td> <td>6</td> </tr> <tr> <td>g) Weak legal/regulatory framework for selling over the Internet....</td> <td>7</td> </tr> <tr> <td>h) Cost of development and /or maintenance is too high...</td> <td>8</td> </tr> <tr> <td>i) Lack of awareness on online selling.....</td> <td>9</td> </tr> <tr> <td>j) Lack of skilled employees to develop, maintain or use the technology required.....</td> <td>10</td> </tr> <tr> <td>k) Lack of internet infrastructure.....</td> <td>11</td> </tr> <tr> <td>l) Not relevant as selling over the Internet is currently under development or planned for the near future.....</td> <td>12</td> </tr> <tr> <td>m) None.....</td> <td>13</td> </tr> <tr> <td>n) Others (Specify).....</td> <td>14</td> </tr> </tbody> </table>	a) enterprise products not well suited for sale via the Internet.....	1	b) Security concerns.....	2	c) Privacy concerns.....	3	d) Prefer to maintain current enterprise model, e.g. face to face interaction	4	e) Customers' or suppliers' computer systems not compatible	5	f) Insufficient level of customer demand for purchasing via the Internet...	6	g) Weak legal/regulatory framework for selling over the Internet....	7	h) Cost of development and /or maintenance is too high...	8	i) Lack of awareness on online selling.....	9	j) Lack of skilled employees to develop, maintain or use the technology required.....	10	k) Lack of internet infrastructure.....	11	l) Not relevant as selling over the Internet is currently under development or planned for the near future.....	12	m) None.....	13	n) Others (Specify).....	14			
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CYBER SECURITY refers to the body of technologies, processes, and practices designed to protect networks, devices, programs and data from attack

Vishing is the criminal practice of using social engineering over the telephone system to gain access to private personal and financial. Example Those (Mtukulapakhomo mwawina malata) text messages.

Ransom ware: is a type of malware that restricts access to the infected computer system in some way, and demands that the user pay a ransom to the malware operators to remove the restriction.

154

H5	Did the enterprise experience online crime in 2019? <i>(Multiple response)</i> a) Hacking..... b) Phishing c) Theft of money (online)..... d) Theft of information (online)..... e) Identity theft..... f) Website vandalism..... g) Computer virus h) Ransom ware..... i) Denial of service..... j) Vishing k) Other (specify)..... L) None.....	<table> <tr> <th>YES</th> <th>NO</th> </tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> </table>	YES	NO	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	If YES, go to next Module
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	<table> <tr> <td>1</td> <td>2</td> </tr> </table> 	1	2																																
1	2																																		
H7	What was the approximate value lost during 2019 in MWK? 1. Through online transactions..... 2. Through unauthorised withdrawals 3. Through Mpamba/Airtel Money..... 4. Cost of recovery	<table> <tr> <th>Absolute value (MK)</th> </tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </table>	Absolute value (MK)																																
Absolute value (MK)																																			
H8	Did your enterprise report the online crime to any of the following? 1. Malawi Police Service 2. Malawi Communications Regulatory Authority (MACRA)	<table> <tr> <th>YES</th> <th>NO</th> </tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> </table>	YES	NO	1	2	1	2																											
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H9	Did your enterprise report the online crime to any of the following? € 1. Enterprise's own employees € 2. External service provider	<table> <tr> <th>YES</th> <th>NO</th> </tr> <tr><td>1</td><td>2</td></tr> <tr><td>1</td><td>2</td></tr> </table>	YES	NO	1	2	1	2																											
YES	NO																																		
1	2																																		
1	2																																		

MODULE K: POSTAL SERVICES

Qno	Questions & Filters	Coding Categories	Skip Instruction
K1	Did your enterprise have a post office box during 2019?	Yes.....1 No.....2	<i>If No Skip to K9</i>
K2	Did your enterprise use any postal services during 2019?	Yes.....1 No.....2	<i>If No skip to K4</i>
K3	Which postal services did your enterprise use during 2019? 1. Sending and receiving mail..... 2. Payment of bills..... 3. Correspondence with businesses, Org, Govt etc..... 4. Parcels or Packets..... 5. Private post office box/PRIVATE..... 6. Money Transfer ServiceE..... 7. OTHER (SPECIFY).....	YES NO 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
K4	Did your enterprise receive orders via post mail during 2019?	Yes.....1 No.....2	<i>If No skip to K6</i>
K5	If Yes, what was the proportion of orders received via post mail to total orders during 2019? 158 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	 1 2 3 4	
K6	Did your enterprise press orders via post mail during 2019?	Yes.....1 No.....2	<i>If No skip to K8</i>
K7	What was the proportion of orders pressed via post mail to total orders during 2019? 1. 0 - 25 %..... 2. 26 - 50 %..... 3. 51 - 75 % 4. 76 - 100 %	 1 2 3 4	
K8	What challenges did your enterprise face when using postal services during 2019? A) Post Office is too far..... B) Poor services..... C) It's expensive..... D) I use other means..... E) Other specify.....	YES NO 1 2 1 2 1 2 1 2 1 2	

MODULE I: INTERNET OF THINGS (IoT)

The **Internet of Things** is the internet able nature of modern physical devices, vehicles, and buildings. You may also have heard of IoT products as connected devices or smart devices. The Internet of Things is everything that connects to the internet.

Qno	Questions & Filters	Coding Categories	Skip Instruction
I1	Did your enterprise use any IoT product, such as a smartwatch, smart refrigerator, or office monitoring system?	Yes 1 No 2	if No , skip to next module
I2	Which IoT product(s) did your enterprise use? Select all that apply 1. Personal fitness tracker (i.e. Fitbit) 2. Smart refrigerator..... 3. Office monitoring system..... 4. Smart thermostat..... 5. Virtual reality headset..... 6. Smart TV..... 7. Other (please specify).....	YES NO 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
I3	Does your enterprise use an application to manage your IoT devices?	Yes.....1 No.....2	
I4	Did you update the software on your IoT device during 2019?	Yes....1 No.....2	
I5	Did you use any of the following security products to protect your IoT devices during 2019? 1. Dojo..... 2. Bitdefender Box 3. Cujo..... 4. RATtrap 5. Norton Core 6. None..... 7. Other (please specify).....	YES NO 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
MODULE J: BIG DATA			
Qno	Questions & Filters	Coding Categories	Skip Instruction
J1	During 2019, did your enterprise analyse big data from any of the following data sources? 1. Enterprise's own data from smart devices or sensors 2. Geolocation data from the use of portable devices 3. Data generated from social media 4. Other big data sources not specified above	YES NO 1 2 1 2 1 2 1 2	

	MODULE K: POSTAL SERVICES continued		
Qno	Questions & Filters	Coding Categories	Skip Instruction
K9	Did your enterprise use any courier services during 2019?	Yes.....1 No.....2	<i>if no, skip to NEXT MODULE</i>
K10	Which courier operators did your enterprise use during 2019? 1. Postal Operator..... 2. Posts Courier 3. G4S(Malawi) LTD..... 4. FedEx Express..... 5. DHL International Malawi Limited..... 6. Skynet..... 7. Glens (Malawi) Limited– ARAMEX T/A Aramex..... 8. Speed Courier..... 9. Air Cargo Limited..... 10. Xerographics (UPS)..... 11. AMPEX Courier..... 12. SOSOSO Courier Services. 13. Ankolo.com..... 14. Kwezy Bus Courier.....	YES NO 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2	
K11	Which challenges did your enterprise face when using courier services during 2019? 1. Delays..... 2. Parcels getting lost..... 3. Parcels getting damaged..... 4. Expensive..... 5. No insurance cover..... 6. Other (specify).....	YES NO 1 2 1 2 1 2 1 2 1 2 1 2	

MODULE L: ICT EXPENDITURES

Qno	Questions & Filters	Coding Categories	Skip Instruction																	
L1	How much did the enterprise spend on the following during 2019 in MWK? 1. Renewing and updating website..... 2. Telephone bills..... 3. Airtime for employees..... 4. Internet bills..... 5. Computer (Desktop and laptop)..... 6. Tablets..... 7. Phones..... 8. Television..... 9. Radio..... 10. Software..... 11. Network infrastructure (include servers)..... 12. Data centre hosting..... 13. Repairs and maintenace of ICT equipments..... 14. Pay TV charges..... 16 .Other (Specify)_____	Absolute value in MWK <table border="1"> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </table>																		
MODULE M: ICT MANAGEMENT																				
M1	Are you aware of the National ICT policy (2013)?	Yes.....1 No.....2	<i>if no, skip to M3</i>																	
M2	Does this enterprise adhere to this National ICT policy ?	Yes 1 No 2 Don't know 3	<i>if yes, skip to M3</i>																	
M2a	Why Does this enterprise NOT adhere to National ICT policy ? a. Not sensitized by the responsible Ministry..... b. Not consulted c. Policy outdated..... € d. Specify.....	1 2 3 4																		
M3	Does this enterprise have an Internal ICT policy ?	Yes.....1 No.....2																		
M4	How many of the enterprise computers run on the following operating systems during 2019? 1. Microsoft windows..... 2. Linux/ Ubuntu..... 3. Macintosh/ Mac OS..... 4. Unix..... 5. Android..... 6. Other(Specify)_____	Number of computers <table border="1"> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> <tr><td></td></tr> </table>																		

Qno	Questions & Filters	Coding Categories		
M5	Please indicate who mainly performed the following ICT functions of your enterprise in 2019	Mainly own employees inc those employed i parent or affiliate enterprises	Mainly external supplier (OUTSOURCED)	Not applicable
	Maintenance of ICT infrastructure e.g. servers, computers, printers, networks	1	2	3
	Support for office software e.g. word processors, spreadsheets, etc	1	2	3
	Development of business management software/systems e.g. ERP - enterprise Resource planning used to manage resources by sharing information among different functional areas such as accounting, planning, production, marketing; CRM software application for managing information about customers; Human Resources information management, databases Exclude purchases of pre-packaged software	1	2	3
	Support for business management software/systems e.g. ERP, CRM, HR, databases	1	2	3
	Development of web solutions e.g. development of your enterprise's website, apps, e-commerce solutions, etc Support for web solutions e.g. support of your enterprise's website, apps, e-commerce solutions, etc exclude hosting your enterprise's website	1	2	3
	ICT security and data protection e.g. security testing, training on security, resolving ICT security incidents, etc	1	2	3
M6	If answer is 2 in M5 above for each function, Why did the enterprise decide to use external supplier to perform these ICT functions			
		Lack of ICT specialist	Its cheaper to use external supplier	Other
	Maintenance of ICT infrastructure e.g. servers, computers, printers, networks	1	2	3
	Support for office software e.g. word processors, spreadsheets, etc	1	2	3
	Development of business management software/systems e.g. ERP - enterprise Resource planning used to manage resources by sharing information among different functional areas such as accounting, planning, production, marketing; CRM software application for managing information about customers; Human Resources information management, databases Exclude purchases of pre-packaged software	1	2	3
	Support for business management software/systems e.g. ERP, CRM, HR, databases	1	2	3

	Development of web solutions e.g. development of your enterprise's website, apps, e-commerce solutions, etc Support for web solutions e.g. support of your enterprise's website, apps, e-commerce solutions, etc exclude hosting your enterprise's website	1	2	3
	ICT security and data protection e.g. security testing, training on security, resolving ICT security incidents, etc	1	2	3

MODULE N: ICT WASTE DISPOSAL

Qno	Questions & Filters	Coding Categories																															
N1	Is the enterprise aware of how electronic waste should be disposed off?	Yes.....1 No.....2	If NO skip to N3																														
N2	Did this enterprise have an e-waste management policy in 2019?	Yes.....1 No.....2																															
N3	How did your enterprise dispose of unwanted or obsolete ICT equipment during 2019?	CIRCLE ALL THAT APPLY <table border="1"> <thead> <tr> <th>Sold</th><th>Waste bin</th><th>Sent for recycling</th><th>Donations</th><th>Others (Specify)</th></tr> </thead> <tbody> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr> </tbody> </table>		Sold	Waste bin	Sent for recycling	Donations	Others (Specify)	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
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	Questionnaire complete by..... Designation Signature Name of enumerator..... Name of Supervisor..... Supervisors signature..... Date of Inspection.....	CODE <table border="1" style="display: inline-table; width: 80px; height: 40px;"></table> CODE <table border="1" style="display: inline-table; width: 80px; height: 40px;"></table>																															