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The growing importance of technology in economic and social development in the developing world

Service and technology are the differentiators between countries that are able to tackle poverty effectively by growing and developing their economies, and those that are not.

By Lee-Roy Chetty

Technological innovation and Information Communication Technologies (ICTs) represent a way for nations within the developing world to foster economic development, improve levels of education and training as well as address gender issues within society.

In many emerging nations it is a major challenge to gain access to capital and market information. Developing nations specifically do not have functioning infrastructure or much in the way of financial resources.

In sub-Saharan Africa for example, approximately 29% of roads are paved, barely a quarter of the population has access to electricity, and there are fewer than three landlines available per 100 people.

In Indonesia, 75% of the country has household incomes below $2.50 per day. The combination of poor infrastructure and poverty makes it difficult for citizens to access financial resources and information.

However, a basic form of technology – such as a simple mobile phone – has been proved to assist people communicate with one another, access market information, sell products across geographic areas, reach new consumers, enter mobile payment systems, reduce fraud and crime and empower women and the disadvantaged.

With mobile phones and tablets proliferating at a significant rate, these communications tools enable women, the disadvantaged, and other individuals to access a broader range of investors, suppliers, and customers. Combined with social media platforms, people can extend their reach through mobile devices and pool resources in meaningful ways.

The Self-Employed Women's Association (Sewa) in India includes 1.1 million workers who pool their resources to improve their bargaining power. The organisation sends agricultural workers daily SMSs on commodity prices so farmers can determine the best places to sell their products. Those participating say they have been able to market fruits and vegetables over wider areas and thereby earn higher incomes.

The Ethiopia Commodity Exchange Program (ECEP) has helped entrepreneurs expand their markets. Before 2008, 95% of farmers sold their products in local markets and were not able to access other areas. Transaction costs were high and they had problems getting fair prices due to the lack of market competition. With the advent of the ECEP, agricultural producers gained access to external buyers and

were able to negotiate better prices. This boosted their incomes and improved the quality of food products.

The India-based Hand in Hand Partnership (HIHP) enables women to use mobile devices to launch businesses in the technology area. It provides mentorship, training, credit, and technical support.

In Kenya, the Farmers Helpful Network (FHN) gives agricultural producers access to the latest research through their mobile phones. Farmers can ask questions of experts concerning crop rotation, artificial insemination, and crop insurance. This helps them improve their agricultural production and marketing, and increase their overall income.

Access to mobile technology is particularly important for females because there are, globally, 300 million fewer women than men who own mobile devices. Overall, there is a 21% gender gap in owning a phone worldwide, but this number rises to 23% in Africa, 24% in the Middle East, and 37% in Asia.

Wireless communications also plays an important role in education and training.

In Indonesia, the Global Ready eTraining Center programme has trained over 1000 students in technology services. Those enrolled get vouchers for a three-month programme. More than 95% of the individuals enrolled completed the class, and 75% said the course increased their income as a result of the skills acquired in the program.

A survey undertaken by the United Nations Development Programme (UNDP) found that 55% of women around the world earned additional income due to owning a mobile phone and 41% increased their income and professional opportunities.

Mobile payment systems represent a way to reduce the cost of financial transactions and thereby help entrepreneurs. If people can transfer funds quickly and efficiently, it becomes easier for small and medium-sized businesses to sell their products. This improves the efficiency of the marketplace and removes barriers to growth.

Reducing "friction" is very important in African, Asian, and Latin American financial markets because barriers to financial transactions remain quite high. Only 30% of those who live in developing African nations have bank accounts.

In short, mobile technology offers extensive help on various forms of social and economic development.

Wireless communications broaden access to information, improve capital access, overcome geographic limitations, and expand market access.

However, the continued and equitable expansion of Information Communication Technology (ICT) depends on electricity. The real divide over the next 20 years will be between those who have access to reliable electricity to power these devices and those who do not.

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To promote technological advances, developing countries should invest in quality education for youth, continuous skills training for workers and managers, and should ensure that knowledge is shared as widely as possible across society.

In a world in which the Internet makes information ubiquitous, what counts is the ability to use knowledge intelligently. Knowledge is the systemically integrated information that allows a citizen, a worker, a manager, or a finance minister to act purposefully and intelligently in a complex and demanding world. The only form of investment that allows for increasing returns is in building the stocks and flows of knowledge that a country or organisation needs, and in encouraging new insights and techniques.

Adopting appropriate technologies leads directly to higher productivity, which is the key to growth.

In societies that have large stock and flows of knowledge, virtuous circles that encourage widespread creativity and technological innovation emerge naturally, and allow sustained growth over long periods. In societies with limited stocks of knowledge, bright and creative people feel stifled and emigrate as soon as they can, creating a vicious circle that traps those who remain in a more impoverished space. Such societies stay mired in poverty and dependency.

The investment climate is crucial, as are the right incentive structures, to guide the allocation of resources, and to encourage research and development.

Successful countries have grown their ability to innovate and learn by doing, by investing public funding to help finance research and development in critical areas. Everyone is involved – big and small, public and private, rich and poor.

The benefits that are certain to flow from the technological revolution in an increasingly connected and knowledge-intensive world will be seized by those countries and companies that are alive to the rapidly changing environment, and nimble enough to take advantage of the opportunities. Those that succeed will make substantial advances in reducing poverty and inequality.

Access and application are however, critical.

Service and technology are the differentiators between countries that are able to tackle poverty effectively by growing and developing their economies, and those that are not. The extent to which developing economies emerge as economic powerhouses depends on their ability to grasp and apply insights from science and technology and use them creatively. Innovation is the primary driver of technological growth and drives higher living standards. ■

SOUTH AFRICA'S "EXCEPTIONAL UNEMPLOYMENT"

Is tax the silver bullet?

The report actually finds that effective tax rates and regulations represent the least important of all obstacles to doing business in South Africa, amounting to only 0.7% of all obstacles according to their business survey.

By Itumeleng Rantao

In August 2012, economist Chris Hart made headlines by classifying South Africa's unemployment levels as "exceptional". As reported, he compared the unemployment situation here to the employment success story of Brazil, and counselled that taxation policies, not labour laws, were to blame for our persistent unemployment problem.

This focus on a reduction in taxation is in line with the New Growth Path (NGP), wherein government has announced its desire to attract more foreign direct investment (FDI) in manufacturing by implementing low effective taxation rates. FDI is viewed as critical for development. Given the recently-announced 43.6% drop in foreign direct investment (FDI) to South Africa this year, in the context of rising FDI to the continent as a whole, lowering effective taxes is being seen as a silver bullet of sorts.

Chris Hart is right; unemployment is a critical problem faced by South Africa. This year, the Organization for Economic Co-operation and Development (OECD) reported that in South Africa only 40 per cent of those of working age have jobs, compared to 65 per cent in Brazil. But we can take the case of Brazil and draw some very different conclusions about what direction South Africa should take in tackling its unemployment problem.

Cross-country studies conducted by the World Bank in 2011 have indicated that lowering effective taxes can indeed attract investment, reduce tax evasion, enhance the creation of small and medium enterprises (SMEs), and ultimately raise sales and gross domestic product (GDP). Small and medium enterprises are rapidly being seen as the solution to South Africa's persistent youth unemployment. A study by Trade and Industrial Policy Strategies (TIPS) provides a solid basis for this belief, finding that between 1985 and 2005 90% of all formal jobs in South Africa were created by small, micro and medium enterprises (SMMEs). As such, reducing effective taxes with an objective of attracting manufacturing FDI and creating SMEs is being seen as a means of resolving this market failure.

But the 2012 World Economic Forum (WEF) global competitive report indicates that in South Africa tax is not the problem. The report actually finds that effective tax rates and regulations represent the least important of all obstacles to doing business in South Africa, amounting to only 0.7% of all obstacles according to their business survey.

So if taxation is not South Africa's major problem, what is? The report finds that leading obstacles to expanding the private sector in South Africa through SMEs and FDI are an inadequately educated labour force, and restrictive labour regulations. These cannot be resolved by tampering with the effective tax rate as initially believed by government, and advocated by Chris Hart.

What can be said of the Brazilian example? Like South Africa, Brazil has very stringent labour laws. However, according to the same WEF report, stringent labour laws in Brazil only account for 10.1% of obstacles to doing business there, whereas they account for 18.5% in South Africa. Crucial barriers to doing business in Brazil appear to be tax regulations, accounting for 18.7% of all obstacles, inadequate supply of infrastructure (17.5% of obstacles), and effective tax rate (17.2% of obstacles).

Despite this, Brazil has managed to substantially increase its employment levels while South Africa has not. Since 2003, Brazil managed to create 8 million formal jobs before the 2008 global financial crisis, which shed 600 000 jobs. Post crisis, Brazil doubled its pre-September 2008 job creation rate.

Lessons from Brazil seem to indicate that both supply-side and demand-side matter. Increased school coverage and increased fiscalisation of labour nurtured and improved skills of the labour force in Brazil. This complemented and accelerated the creation of SMEs and attracted FDI, which led to a recovery of growth which, in turn, impacted on the elasticity of the demand for labour.

Perhaps the most important underlying lesson here is context. In Brazil, major obstacles to expanding the private sector include tax regulations, infrastructure and high effective tax rates.

In contrast, in the case of South Africa, pressing issues include an inadequately trained labour force and restrictive labour laws. South Africa ranks 143 out of 144 countries on hiring and firing practices, and 140 on flexibility of wage determination according to the WEF global competitive index. Brazil ranks significantly higher on these scales (114 and 118 respectively).

As such, it only makes sense for South Africa to focus on labour laws in the short term, and education in the longer term so as to create a favourable business environment. Government is on the right track amending labour laws, because in South Africa, tax, on its own, is definitely not the silver bullet. ■