Executive MBA – Business Project

Telenor Initiative In collaboration with UNICEF ; Digital Birth Registration Project ; " Giving Identity To The invisibles " (No Child Left Behind)

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Introduction

Brief History and Background of DBR

Birth registration of a child via official channels can help and guarantee a child access to a number of vital services, including healthcare and immunisations, education and social protections. For example, as a child grows, the birth registration safeguards the child against forced labour, early marriage or recruitment into the military, and later in life it can enable them to acquire national identity documents, vote in elections, gain formal employment, own property, or access formal financial services. If we look from the perspective of national governments, this birth registration can be and can serve as an essential tool for effective planning and monitoring of the delivery of public services, development policies and infrastructure programmes. These are the reasons, the United Nations Convention on the Rights of the Child, and a number of other international treaties, guarantee every child the right to be registered at birth, and the right to both a name and nationality. However, along with these treaties and a lot of work done in this direction it is still estimated that 230 million children worldwide – nearly one-third of the global under five population – are not being officially registered at birth , and every year at least more than 50 million additional children are born into this state of invisibility. The World Health Organisation estimates that nearly 80% of unregistered children live in either South Asia or sub-Saharan Africa1 , and data from UNICEF shows that in most countries, children who are poor or live in rural areas are significantly less likely to have their births registered or to possess a birth certificate.[i]

Digital Birth Registration

DBR which are initials of Digital Birth Registration, is basically a process to cover each and every child born globally and with reference to my study Pakistan only. Although government of Pakistan had made it compulsory via a legislation to get every born child registered within 30 days of birth but still this was not implemented in full respect. This initiative is taken up by UNICEF (United Nations Children's Fund), Governments of Punjab , Sindh and Telenor Group. [ii] This is an initiative that was taken up by the authorities because a lot of births in Pakistan go unregistered annually due to lack of proper

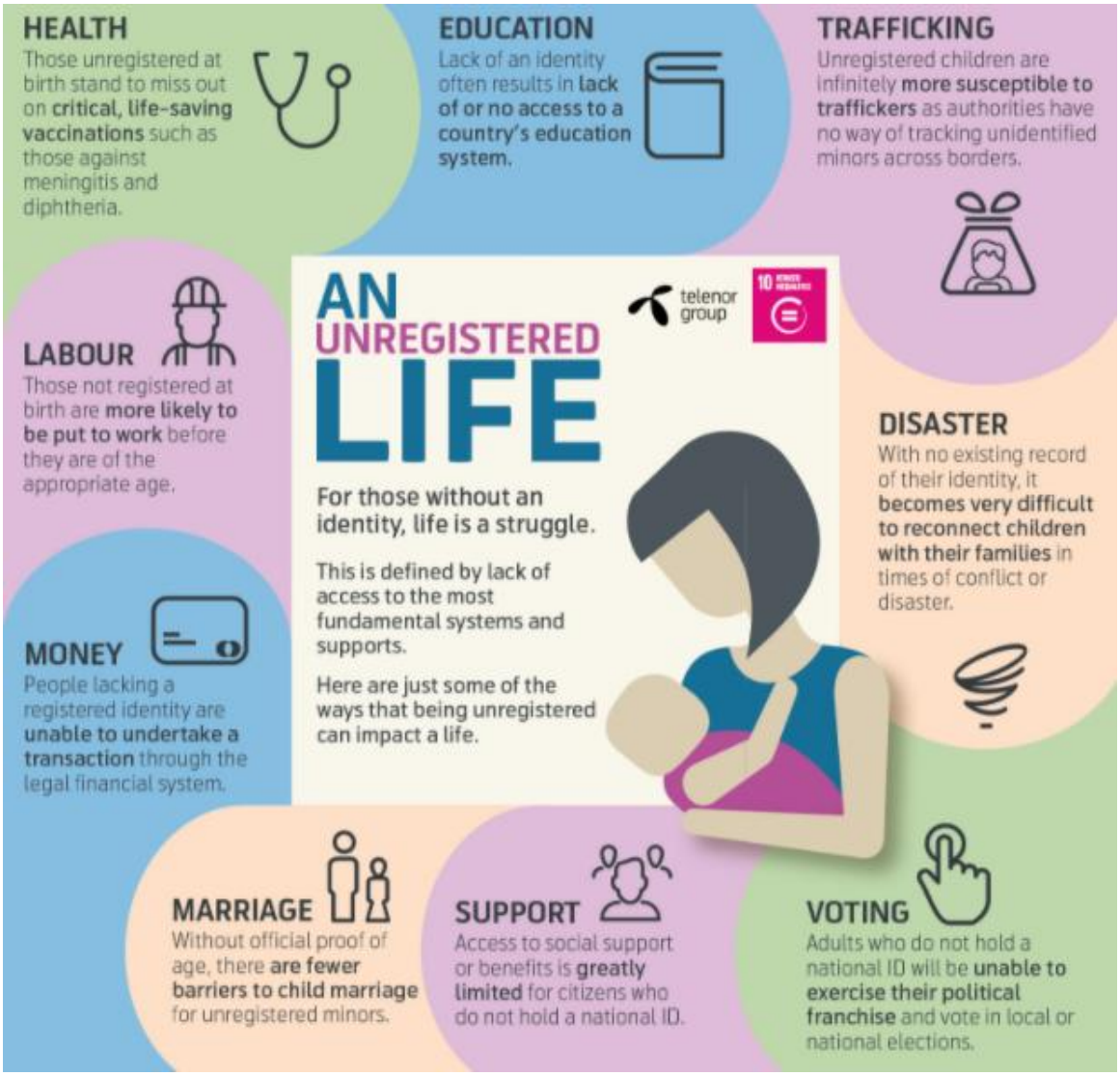
documentation, lack of proper facilities and lack of government offices related to birth registration in the far flung and under privileged areas of the country. The main point and aim of this project is to help every family register their new born with the help of digital channels using a mobile phone. The aim of this project is to give the invisible people of Pakistan an identity and in turn reduce in equalities.

The Issues In Birth Registration

If we look at the stats there are approximately 1.1 billion people in the world who are invisible, this does not convey the point that we cannot see them it basically means that these people did not get registered properly on birth due to which they lack proper identity due to which they are not able to receive the proper health care and other basic facilities that are given by the government of any country to its citizens. If we dig down more in the stats we come to know that from the 1.1 billion people approximately 1 third are the children , this amounts to approximately 366 million and approximately 60 million [iii]children from the 366 million are from Pakistan , hence there is a big room of improvement and need of the hour bridge this gap and give the un-registered children their identity as a result of which they are able to and are eligible for basic necessities and facilities provided by the government of Pakistan.

Below is an image that shows what basic facilities are missed by a child who is born and remains unregistered :

- Lack of access to basic health facilities.
- Lack of access to basic educational facilities.
- Such unregistered children are more susceptible to trafficking.
- Lack of social support.
- Lack of barriers towards child marriage.
- Lack of barriers towards child labour.
- Lack of medical and financial support access in case of any mishap or natural calamity.



This figure has been taken from https://www.telenor.com/sustainability/digital-birth-registration/giving-pakistani-children-an-identity/

This project is basically not about reinventing the things this is helping in improving the current process and combining them together in order for ease of access to the local people of Pakistan.

Mobile Enablement In DBR

This project was first initiated in 2014, as a proof of concept and a first-of-its-kind pilot was launched with a simple solution. For this solution to work end to end an android app was developed by the in house software developers of a team from Telenor Pakistan, this App was installed in the android devices and these devices were then handed over to authorized

personnel, including health workers, marriage registrars of the local and federal government and this facility was also provided at Telenor distribution points along the pilot areas of Punjab and Sindh provinces. The health workers and marriage registrars were given a plan to move from house to house as part of their regular responsibilities carrying the Digital Birth Registration device, meanwhile the Telenor distribution centres also served as point of contact for the people of the surrounding areas for their mobile-related needs. These government authorized personnel reported birth-related data along with required documentation directly to the approving authority via the app. A dashboard solution is also available to government authorities to monitor progress on daily basis and the required reports were also sent to other required officials in the value chain.

Putting the hammer in the right direction causes the best strike and hence since there is a huge potential only in the pilot phase we got an awesome result as this initiative caused a substantial increase in birth registration and the range increased from 30% to 90% during just six months, and nearly 50% of the registered children were girls. The project is now being gradually scaled.[iv]

DBR Process

Digital Birth Registration Steps

Below is an image which shows the process of the Digital Birth Registration and making it easy for the inhabitants of the localities to get their newborns registered with the government with ease. This process basically 5 steps which are as follows :

1. A facilitator approaches a house or the member of the house goes to a Telenor Franchise.

2. Through an App the facilitator or the franchisee fills up the form for the house person and submits the form.

3. The form after submission is sent to government officials for reveiew.

4. The Government officials review the form and share feedback in case of any ambiguity and than approves it.

5. Once approved from authorities the new born child gets registered with the government and he / she will now get a birth certificate.[v]

This figure has been taken from https://www.telenor.com/sustainability/digital-birth-registration/giving-pakistani-children-an-identity/

Government-employed Lady Health Workers (LWH)have been trained on how to use the android-based digital devices, with the help and use of which they enter data of birth registration onto the government dashboard in real time on the devices available to them. The data is then received and analyzed by the Union Council Secretary and processed, which in turn results in the registration of the child in the National Database and finally the birth certificate for the new born child is issued.

It was observed and found that during the implementation of DBR project, a few of the LHWs expressed difficulties in understanding how to use mobile devices. This is why the authorities decided to include few grown up childrens of the health workers who know how to read , write in English and urdu and were invited to attend the trainings. They can now assist their mothers in case of technical glitches.

“Some families who initially refused to even open their doors to the health workers for getting their child registered are now helping LHWs reach more families. As per the stats only last year, about 300,000 children were registered in the province of Sindh, thanks to the efforts of the Health workers and other community workers including nikkah registrars (local clerics) and UC secretaries. The project will continue until 2022 in a bid to register up to three million children in five districts of Sindh. This will support Pakistan’s efforts towards the national goal of achieving universal birth registration targets by 2024.[vi]

Responses from government authorities highlighting the importance and gravity of this project were also captured and pasted below as well :

“Highlighting the importance of the birth registration initiative in FATA, Jahangir Khan, Assistant Director, Local Government Rural Development says, “I cannot explain how big a blessing this project has been for the people of this region. Young people from other agencies who are not yet included in the system have also started to approach us for birth certificates. Families are willing to get their children registered at any price. We are hoping this initiative will expand to all areas of FATA, as no one deserves to live a life where one is deprived of fundamental rights, and all opportunities that follow thereafter.**”**[vii]

Role of stakeholders of the project

Role of Stakeholders		
Telenor (Digital Enabler)	**Government** (Owners and Facilitators)	**UNICEF** (Implementer)
• Provide a cross-functional team to support technology development, maintenance and training; • Leverage Telenor distribution channels as a parallel gatekeeper model; • Provide handsets and devices to support registration; • Provide digital connectivity for data collection, consolidation and financial disbursements; • Leverage Easypaisa to provide timely and transparent disbursements of incentive stipends to facilitators • Support communications and awareness-raising activity; • Work with relevant authorities to develop and support mHealth services; • Provide financial assistance	• Ensure the smooth integration of DBR through policy and administrative reforms; • Provide necessary human resources and infrastructure to support the project; • Mainstream DBR in future development planning and budgeting; • Utilise private sector outreach and footprint to extend access of basic services	• Provide oversight to project implementation; • Oversee project funding and accountability; • Act as the primary interface with government authorities; • Lead on institutional capacity building (technology and human resources); • Help develop and deliver communications and awareness-raising campaign; • Lead on measurement and evaluation activities

Summary Questions & Inputs from the Project Team

I made a questionnaire about the steps involved along with road blocks in the end to end implementation of the project below is the feedback attached from the questionnaires :

Questions on Digital Birth Registration.doc

Questions asks from the team are pasted in the appendice , summary is defined below :

DBR is basically “Digital Birth Registration” which aims that no child is left behind in the world , conveying the message that every born child is registered and gets access to basic necessities wherever he / she is born. This was needed in Pakistan due to the unavailability of such services in rural areas of Pakistan. Telecom is the best mode for execution of this project as in these current times atleast 1 person in every household owns a phone. This is a CSV (creating shared value) project as it involves collaboration of Telco – IT and non profit firms. The technology used in this includes Telecom – IT and radio methods. The process flow is simple and it starts as soon as a child is born and childs registration is kick started by his/her parents via a phone. Providing basic facilities and necessities to each and every

child is the sole purpose of this initiative. For now there are no shortcomings in this only we need to increase the pace of it and the range and areas it is covering. The future of this is bright and long lasting.

Achievements Of DBR

Telenor Group and Telenor Pakistan have claimed multiple awards for their initiative of Digital Birth Registration at both national and international level. Recently Telenor Pakistan has grabbed award for Digital birth Registration (DBR) in the AD Stars award based in busan South Korea. The main reason for this award was its innovation and uniqueness as to date more than approximately 1million unregistered children have been registered via this channel. DBR has won few more awards and has also been nominated for global awards multiple times , some are mentioned below : [viii]

- Ad Stars award 2020
- GSMA award 2018[ix]

Why Telenor ?

Telenor's involvement in the DBR project in Pakistan aligns perfectly with their commitment to SDG #10, their wider business strategy, and their ambition to empower societies. Their vision to play a leading role in Pakistan's digital revolution and reduce inequalities made them the perfect partner for the project, as did the fact that they have the best level of mobile penetration and greater access to customers in rural areas where birth registration rates are particularly low. In addition to enabling Telenor Pakistan to grow, attract the best minds, and 'create their future together with the people they serve', supporting the DBR project provided a unique opportunity to strengthen their relationship with existing and new customers and introduce new value-added services, potentially leading to reduced customer churn in Pakistan's increasingly competitive market. Furthermore, because birth registration falls under the mandate of local government bodies and the social sector, involvement in these activities provides an opportunity for Telenor to collaborate with public sector institutions in a meaningful and positive way. The barriers to birth registration – in Pakistan and elsewhere – can be varied and complex, and are likely to be influenced by a range of factors including the state of a country's civil registration and national identification systems, national policies and legal frameworks, and a number of other

supply and demand-side barriers. As a starting point for any DBR project, partners must conduct research to identify key barriers to As a result of this progressive attitude towards sustainability, the DBR project has benefitted from a high level of support from senior management in Pakistan, as well as the full support of Telenor Group. Telenor provided significant human resources to develop and modify the mobile technology in-house, seeing this as a key opportunity to contribute to the project in a more tangible way and create value for both the partnership and their organisation. Telenor also contributed a wide range of other in-kind resources to the project, including: • Mobile devices for registrars (or 'gatekeepers') and government staff at Union Council offices; • SIM cards, subsidised data connectivity and Wi-Fi access; • The facilitation of mobile money payments to gatekeepers through the 'Easypaisa' platform; and • The timely repair/replacement of all devices through its local official touch points. Taken together, it is estimated that Telenor has contributed over $600,000 worth of in-kind support the project

Supply-side barriers & Demand-side barriers

In many countries, the Civil Registration and Vital Statistics (CRVS) process is fragmented or decentralised, making it difficult to standardise birth registration forms and procedures, or to foster coordination among registrar offices and other government ministries. In Pakistan, birth registration is the responsibility of each Union Council (UC), the smallest administrative unit in local government, which creates and maintains civil registration records for residents and reports these statistics to the National Database and Registration Authority (NADRA) for authentication purposes. There is a general lack of transparency in the registration process, and it is common for UC offices to be constrained by a lack of resources, low capacity levels among staff, an absence of incentives for facilitating registration, frequent power cuts, intermittent network connectivity and unreliable technology. Parents often face barriers to registration that stem from a lack of financial resources, illiteracy and confusion over how to complete the registration process. The traditional registration process in Pakistan often requires a child's father to make multiple trips to the nearest UC office, with each trip costing a household PKR 297 (USD $3.00) in Sindh and PKR 736 ($7.40) in Punjab; in remote areas, this is roughly equivalent to a parent's daily wage. Parents must also consider the hidden costs associated with birth registration, such as the income lost from taking time off of work. Furthermore, if a child is not registered within a stipulated timeframe in the UC where the birth occurred, the family may be penalised financially and subjected to additional and complex administrative procedures. The required documentation for

registering births may also be unclear to parents, or even differ across locations. In many circumstances, applicable legal frameworks governing birth registration are out of date and/or not fully aligned with international minimum standards. Parents may not be able or willing to meet some of the process requirements for registration, such as submitting a marriage certificate or national ID documents. Within Pakistan, each of the country's provinces/regions creates their own application forms, and UNICEF has reported anecdotal evidence which suggests that fees are not always charged as per the stated rates, with bureaucratic hurdles and lengthy processing times sometimes used as a means to obtain bribes from citizens to expedite the registration process. Incentivising parents to engage in the birth registration process can be particularly difficult in areas where an adult's own experience tells them that, in practice, this is not necessary for accessing basic services, especially health care or education. For instance, GSMA has noted previously10 that there are no 'written rules' in Pakistan that require evidence of birth registration when enrolling children in school, accessing health services, registering for Pakistani citizenship, or obtaining a national identity card. Furthermore, due to certain social, cultural and economic factors, some groups simply do not perceive any benefit from the registration of their children at birth. For example, due to the existence of a number of gender biases, some parents may not be inclined to register their female children, as they do not anticipate that their daughters will engage in the future in any form of public life.

Telenor's Team

Over the course of the project, Telenor dedicated a significant amount of time and resources to the internal development of the technology, while also contributing to technology-related policy work and capacity building activities. Due to the project's potential impact and alignment with Telenor's vision around technological empowerment, it was given the support of a dedicated, cross-functional project team. This project team had previously worked together to design similar applications for other NGO partners, and included representatives When designing DBR solutions, partners should give extensive attention to the specific human and technical limitations of the market. Projects should include a capacity-building component to ensure new registrars have the skills and knowledge they need to carry out their roles, and applications should be designed to be both easy-to-use and interoperable. This will ensure that the application works across multiple platforms, allowing governments to explore partnerships with other mobile providers and expand coverage to other regions throughout the country.

It is vital that partners remain open and responsive to learning and are prepared to adjust the process or applications as often as required. Continuous learning systems, including call centres and face-to-face visits, should be part of the programme's design so that partners can collect feedback from end-users on a regular basis and ensure they are aware of any challenges. Best practice recommendation from the Sustainability, Technical, Commercial, MFS, B2B, Sourcing, Devices and Communications teams. When needed, the team also engaged a number of other relevant functions across Telenor, including Systems, Operations, and Information Security. This brought in a range of expertise into the project, as well as new and interesting ideas about how the technology could bring value to the DBR process. Team members also spent time together in the field to better understand the situation on the ground.

Telenor Pakistan

Telenor Pakistan is part of Telenor Group (Telenor ASA) **Telenor ASA** is basically a Norwegian multinational telecommunications company headquartered at Fornebu (Oslo). It is one of the world's largest mobile telecommunications companies with operations worldwide, but more focused and based in Scandinavia, Eastern Europe and Asia. It has extensive broadband and TV distribution operations in four Scandinavian countries, and a young aged research and business line for Machine-to-Machine technology. Telenor owns networks in 13 countries and has operations in 29 countries. Telenor is listed on the Oslo Stock Exchange and had a market capitalization in December of Norwegian Krones Revenues in 2018 were NOK 110.4 billion, making it the third largest company listed on the OSE. Telenor Pakistan on the other hand reported revenue of PKR 28.066 Billion for 2018. [1]

The ambition of Telenor Pakistan is to **"Connect customers to what matters most to them"** and Telenor is doing this by empowering societies through its data and other Services. Telenor Pakistan's values are as follows :

[1] https://www.telenor.com/

- **Always Explore.** We believe growth comes from learning every day. We're curious and we dare to challenge, test, fail fast and pivot.
- **Create Together.** We believe diverse teams find better solutions. We seek different perspectives, share, involve and help each other succeed.
- **Keep Promises.** We believe that trust is key in all our relationships. We take ownership and pride in delivering with precision and integrity.
- **Be Respectful.** We believe in the unique human ability to understand what matters for people. We meet everyone at eye level, listen and show that we care.[2]

Moreover, currently Telecom sector, specifically Telenor is working in pitching (showing customers) customers to contextualized offers. This is being done in order to keep customer intact with the service provider and in return earn revenue in the avenue which was never explored before, Telenor is the first to launch such offers in the area. For Telenor Pakistan and Telenor Group contextualized offers pitching has acted as a new stream of revenue.[3][4]

Telenor & its Operations in Pakistan

Telenor started offering its services in Pakistani Market back in April 2004 , starting from a SMS & Voice services-based brand offering a European standard call and SMS coverage to all its subscribers. Telenor's existence goes from main urban cities to the most remote and far flung areas of Pakistan which makes its special for the people of Pakistan.

Moreover, below are brief highlights on Telenor.

- **International Prepaid and Postpaid Roaming Service**

[2] www.telenor.com.pk

[3] https://www.telenor.com.pk/personal/telenor/offers/

[4] https://www.phoneworld.com.pk/telenor-pakistan-wins-best-in-telecommunication-in-pakistan-and-best-in-pr-awards-at-8th-pas-awards/

Telenor has an extensive International Roaming network covering over 170 destinations, the most comprehensive worldwide coverage offered by a mobile operator in Pakistan, therefore customers can easily rely on Telenor services while travelling abroad for both prepaid and postpaid segments.

- **Largest DATA network of Pakistan**

  Telenor is one of the largest Data Network in Pakistan while offering 3G/4G data services to its customers in almost more than 90% of its coverage area. Moreover , as we speak work on 5G readiness has been initiated and will be launched for the consumers soon enough.

- **Largest Network of AJK & Northern Areas**

  Telenor also has the pleasure of connecting millions of people in the North of Pakistan including AJK. Telenor is providing coverage in Azad Kashmir and Northern Areas where no other network ventures. Giving seamless coverage at numerous destinations across Pakistan, while aggresively continuing efforts to expand its network.

- **Pakistan's first inflight cellular service**

  Telenor Pakistan launched First In-flight mobile phone services onboard International flights collaborating with AeroMobile exclusively on Emirates Airline. With AeroMobile complete global coverage, telenor subscribers can safely use their own mobile phones to call and SMS just as they would on ground.

For our case if we discuss about Telenor , Total subscribers of Telenor are about 43million ,now if we take into account stats from last three years (source PTA website) :

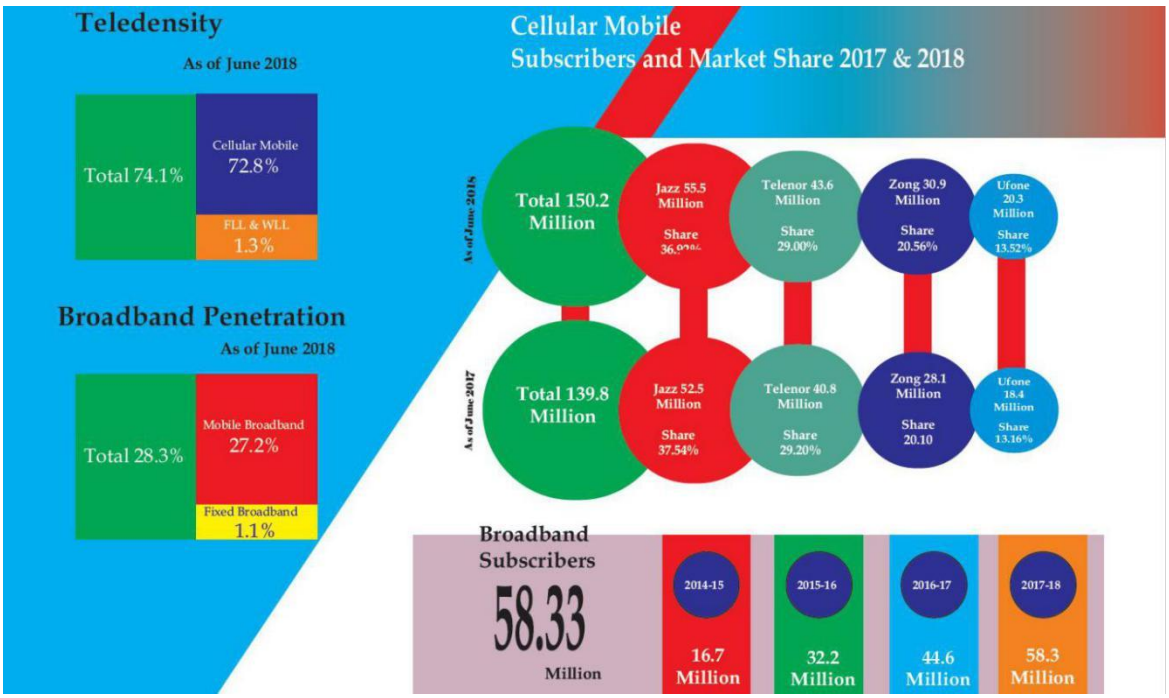
Mobile Cellular Revenues

	2015	2016	2017	3 Year Revenues
CMPak	47.75	52.40	65.95	166.106
Telenor Pakistan	85.27	93.81	101.51	280.90
Jazz	94.30	122.70	144.04	361.04
Ufone	49.38	51.27	50.98	151.64
Total	276.7	320.18	362.48	959.69

Figures are in Billion Pakistani Rupees

As per the stats from PTA website Telenor earned PKR **280.9 Billion** in last 3 years. Now as per discussion and internal survey it has been known that 5% of the revenue earned from above is due to contextualized offering which amounts to (0.05 * 280.9 Billion PKR) 14 billion PKR (for 3 years) which means 4.7 billion PKR revenue per year in the last three years. This is the potential of contextualized offering of offers in the telecom industry. Telenor Pakistan launched contextualized offers back in 2017.[5]Whereas , following telenor , Jazz just recently launched make your own offer a few months ago in Aug.[6]

Contextualized offers framework can be used for to map the way for contextualized product promotions , advertisements and marketing. This can be judged by putting research work into customers page visits using Data.The pages and websites that a customer visits using Data (3g / 4g) can also be monitored for contextualized advertisement. The information and data collected as a result can then be used to run predictive analytics using clustering approach (which means “dividing customers into clusters of same types”). Below is an image showing data penetration in Pakistan :



[5] www.telenor.com.pk

[6] https://cells.pk/blog/jazz-packages/jazz-own-bundle-offer/

Data penetration image.[7]

The image above conveys the data usage density (this has been prescribed from pta website) , the data penetration can be used to formulate a business case to initiate contextualized marketing, advertising and promotions of products to run a pilot a first test case for the proof of concept of our case.

RoadMap for Digital Birth Registration

Project stages	Critical components	Key insights or recommendations
DESIGNING FOR IMPACT	1. DEVELOPING A SHARED-VALUE PARTNERSHIP	• Ensure each partner's strategic objectives are aligned • Set specific and clearly-defined roles for each organisation • Leverage MNO's technical expertise and other unique assets (e.g. agent networks and infrastructure) • Establish local project oversight committees to facilitate project coordination and monitor progress
	2. MAPPING THE BARRIERS TO REGISTRATION	• Research the key barriers to birth registration at the household, community and institutional levels • Consider how other contextual factors might affect attitudes towards digital identity • Build the project objectives around key barriers to registration
PROCESSES AND TECHNOLOGY	3. DEVELOPING MOBILE REGISTRATION SOLUTIONS	• Give extensive attention to the specific human and technical limitations of the market • Plan ongoing capacity-building activities to ensure registrars have the necessary skills and knowledge to facilitate digital registrations • Design the mobile applications to be both easy-to-use and interoperable • Keeping product design in-house allows MNOs to deliver value for the project and their organisation - but only if the necessary resources have been allocated and go-to-market delays are prevented • Incorporating other value-added services (VAS) will benefit both the beneficiary and the MNO
	4. ESTABLISHING A NETWORK OF REGISTRARS	• Mobile (non-stationary) DBR registrars are particularly advantageous in hard to reach, rural areas • Upfront and ongoing support is required to ensure registrars will be able to use mobile applications successfully • Ensuring that registrars are able to adequately promote this service is crucial to their success

[7] www.pta.gov.pk

RAISING AWARENESS	5. BELOW-THE-LINE COMMUNICATIONS CAMPAIGNS	• Ensure that your audience's information needs and preferences are understood and met • Leverage MNO's experience delivering action-oriented, on-the-ground marketing campaigns • Focus on reaching parents through sustained below-the-line (BTL) communications activity • Consider all potential dependencies or bottlenecks, such as the need for government to sign-off any communication messages
ACHIEVING SUSTAIN-ABILITY	6. OPPORTUNITIES FOR MNO COM-MERCIAL SUSTAIN-ABILITY	• Mobile money services provide a transparent, convenient and cost-effective means for delivering incentive payments to regis-trars • mHealth services are highly relevant to DBR beneficiaries and could be employed by MNOs to better engage both new and existing customers • DBR can help MNOs enhance their reputation in the community and differentiate themselves from competitors • Incorporating VAS into the project should help MNOs offset a signifi-cant portion of the project's costs and ensure sustainability at scale.
	7. ACHIEVING SCALE: COSTS AND BENEFITS FOR GOVERNMENT	• Provide high-level advocacy and technical support to government to ensure they have planned appropriately to assume responsibil-ity for scale-up • DBR can bring significant cost savings to government, help address key social issues, and add value to the local and national economy in the long-term

Summary on DBR from UNICEF

As an official and permanent recording of a child's identity, birth registration can help bestow access to a number of vital services, including healthcare and immunizations, education and social protections. As a child grows, registration acts a vital safeguard against child labor, early marriage or recruitment into the military, and later in life it can enable them to acquire national identity documents, vote in elections, gain formal employment, own property, or access formal financial services. For national governments, birth registration is an essential tool for effectively planning and monitoring the delivery of public services, development policies and infrastructure programmes. For these reasons, the United Nations Convention on the Rights of the Child, as well as a number of international treaties, guarantees every child the right to be registered at birth, and the right to both a name and nationality. However, it is estimated that 230 million children worldwide – nearly one-third of the global under-five population -

have not had their births officially registered, and every year more than 50 million additional children are born into this state of invisibility. The World Health Organization estimates that nearly 80% of unregistered children live in either South Asia or sub-Saharan Africa1 , and data from UNICEF shows that in most countries, children who are poor or live in rural areas are significantly less likely to have their births registered or to possess a birth certificate2 . It is increasingly evident that in the world's hardest to reach areas, mobile technology is well placed to provide national governments and other ecosystem players with the opportunity to leapfrog outdated, paper-based birth registration systems and offer 1. Philip Setel et al (2007). 'A Scandal of Invisibility: Making Everyone Count by Counting Everyone'. The Lancet. Available at: http://www.who.int/healthinfo/statistics/WhoCounts1.pdf. [Accessed 5 February Summary more inclusive methods of providing unique identities to the underserved, giving more children a foundation for full participation in society. The GSMA has tracked and reported on a number of innovative digital birth registration (DBR) initiatives supported by mobile network operators (MNOs) – including those in Pakistan, Tanzania3 , Ghana, Belize4 , Senegal and Uganda5 – to learn how these projects successfully delivered measurable and significant improvements in birth registration. More recently, the GSMA Digital Identity programmes has been working alongside Telenor Group and Telenor Pakistan to investigate how mobile operators can support DBR projects in a way that is commercially sustainable; for instance, by developing additional revenue streams through data, disbursements and links with other value-added services, such as maternal and child health advisory services. We have produced the Roadmap for Digital Birth Registration as a guide for MNOs and their partners who are seeking opportunities to achieve greater impact, efficiency and efficacy in digital birth registration. Drawing on lessons from, and our recommendations for, the Telenor-supported DBR project in Pakistan, this Roadmap provides a number of insights, examples of good practice, and recommendations for MNOs and their partners at all stages of a DBR project. These include: Designing for Impact, Processes and Technology, Raising Awareness and Achieving Sustainability. While many of the insights and recommendations found in the Roadmap are specific to Pakistan, these should be highly relevant and applicable to birth registration stakeholders across other developing markets.

Reason For Using Mobile as a medium

With approximately ninety million unique subscribers (accounting for 47% the population) and one of the lowest ARPU8 levels in the world, Pakistan is still considered to have an emerging mobile industry. By 2020, GSMA estimates9 that mobile subscriber penetration will grow to just over half of the

population, but during that time the country will also see rapid smartphone growth as devices and data services become more affordable, digital literacy improves and more locally-relevant content is made available. Approximately 85% of Pakistan's territory is covered by mobile networks. As with identity, the mobile landscape in Pakistan is fragmented: male consumers, particularly urbanites, represent a very different market than their female and rural counterparts. Urban men tend to be more advanced phone users, are more likely to own low-cost smartphones, and are more aware of the different applications available and potential benefits of their use. Conversely, rural consumers and women typically displayed low digital literacy and confidence. In rural areas, feature phones predominate, with mobile devices used primarily for social connection purposes such as calling or texting friends and family members. Furthermore, in more conservative areas women's ownership or use of mobile services can be highly stigmatised, and women therefore tend to share the phone with a male family member or a female elder in the home. These 'gatekeepers' monitor female users' history regularly – discouraging use beyond contact within a defined social set. In rural areas, consumers were rarely trialling new mobile services, and people relied heavily on others in their social network with higher levels of digital literacy to support and introduce them to unfamiliar features and services on their phone. This 'gatekeeping' influence is also likely to extend to women's awareness and use of other digital services, including birth registration.

Since birth registration activities commenced in autumn 2017, the project has successfully reported 77,000 new births through the new DBR system. Of these, 51,000 have been reviewed and approved by local government officials at Union Council offices, and 34,000 have been logged and validated by the National Database and Registration Authority (NADRA). Impressively, less than 1% of the applications submitted by the project's registrars have been rejected by government authorities due to inaccurate or incomplete information, and approximately 48% of the children registered on the new system are girls. A qualitative survey exercise led by UNICEF has also shown that parents using the DBR service are more DBR pilot survey results (2015) satisfied with the facilitation and quality of DBR than those who had experienced the traditional, paperbased process. The survey also showed a marked improvement in satisfaction with savings in perceived high-opportunity costs, such as taking days off work and the cost of travelling to Union Council (UC) offices. DBR beneficiaries are happy with the simplicity of the process and largely appreciate the ease in obtaining information through the registrars and the reduced inconvenience in electronical submission. Other benefits highlighted by the survey included increased government ownership of the birth registration processes, improvement in performance management, and increased accessibility of women to birth registration services.

Other Value Added Services (VAS)

The project aims to improve neo-natal and maternal health awareness by incentivizing parents to register for mobile health (mHealth) services developed by Telenor. The information provided through the SMS based service was developed in collaboration with, and approved by, each of the provincial governments and the sequencing of messages was agreed by the national health department. The service offers parents and guardians with proactive 'push tips' for expectant mothers with information related to ante-natal check-ups, helpful advice on nutrition and dietary intake, immunization tracking services, and general health care information. Parents have the option to register for these services, free of charge, when completing birth registration. Capturing the child's birth date through the DBR application allows the service to provide customized information to households, such as reminders for when their child There can be significant learning curves as gatekeepers familiarize themselves with the mobile technology and government processes. Therefore, in the initial months of the project, significant attention and resources must be allocated to building the capacity of the gatekeepers to use the registration devices, to follow official registration procedures, and to identify any challenges with the new digital Linking to other Value-Added Services: mHealth Messaging and Digital Payments is due to be vaccinated, or advice that is relevant for their child's age and stage of development. Additionally, Telenor has leveraged their 'Easy-paisa' platform to facilitate the monthly distribution of incentives to the project's gatekeepers. Mobile money services are a well-established way to send and receive payments in Pakistan, and Easy-paisa is considered a smooth and robust payment platform. It is also convenient for the gatekeepers, as it is the largest mobile banking service in Pakistan, in rural areas the Telenor franchise network largely outnumbers any other financial institution's touchpoints (such as ATMs or physical branches). Digital payments are also preferred by UNICEF and government partners, as they are more transparent than cash, timely and require minimal documentation

Raising Awareness for DBR Across Pakistan

One of the fundamental demand-side barriers to birth registration is parents' lack of understanding as to why registration is important and how they can navigate the registration process. To address this, DBR partners should develop a comprehensive communications and awareness-raising campaign at the

national and local levels, with the aim of creating and sustaining a demand for birth registration services among parents in each targeted district. As trusted service providers, MNOs are strongly positioned to contribute to any DBR project's communications activity. Communications messaging and material should be designed to encourage behavioural change by helping parents understand why birth registration is important, the benefits of using the new digital service, and the practicalities of registering through a local gatekeeper. As a secondary objective, the communications strategy should consider how to inform and influence a wide range of actors who might play a role in scaling the service nation-wide; this might include local government authorities and other potential partners, as well as the 'informed elite' - online communities, students, entrepreneurs, and other key influencers. In the following sections, we provide four key recommendations for designing a below-the-line (BTL) communications strategy for DBR in Pakistan, and also propose a cost-effective BTL communications plan for the project. Raising Awareness Component 5: Developing a below-the-line communications strategy GSMA's end-user research in Pakistan, Tanzania and Côte D'Ivoire found that the concept of mobile birth registration appealed to both men and women, due to the clear cost and time-saving potential. Both parents could see the importance of birth registration and had confidence in using digital solutions to do this, although they emphasised that services needed to be simple and easy to follow, to insure the process was inclusive of, and understood by, everyone. However, in many areas across Pakistan (especially rural communities), prevailing gender norms mean that men act as intermediaries between the women in their family and formal service providers due to the cultural inappropriateness of women speaking with men they do not know. Women, for instance, are generally less likely to engage with mobile phone agents, preferring to rely on male relatives to replace a SIM or recharge airtime or data. Higher access to mobile devices means that men are more likely than women to be reached by SMS services, and higher literacy rates and mobility outside of the home means they are also more likely to be influenced by written communications materials, such as outdoor posters or leaflets. In rural areas, community members tend to prefer accessing information about new services by word of mouth, often depending on local elders or influencers in their community to share information and recommend services. Trusted gatekeepers such as Nikah registrars, Telenor franchises and UC clerks should be effective at engaging men and driving demand for DBR, as are prominent figures such as Nazims (city administrators), maulvis (religious scholars), local politicians or 'jirgas' (a court of influential and elder figures in a community who resolve local matters such as inheritance issues and wealth disputes). Mothers, meanwhile, are most likely to be reached face-to-face through the lady health workers, as well as other influential females in their family or community.

Communications Strategy

Proposed Communications Plan for Pakistan

Channel	Concept	Timelines	Cost Rationale
TV 	Effective means for showcasing the partnership's role in supporting digital inclusion and innovation, reaching key influencers and mass market.	Tied to project launch, but aired periodically over 6 months	TVC production cost: 30 days air-ing budget (spread over six months) on PTV, Sindh-specific channels
SMS 	A targeted and cost-effective approach to sharing specific and timely information on DBR and its benefits. Messages are most likely to reach men due to higher rates of literacy and mobile access. Long-term, the messages could be tied into Telenor's mHealth service to sustain the demand for DBR.	Messaging can be commenced immediately after district launches. Follow-up messages can be sent with high frequency, 1-2 messages per month for at least six months.	Practically free
Billboard 	Provides an action-oriented 'shout out' to the DBR process (why and how) and its benefits, and can feature the logos of all partners.	Tied to project launch, and sustained for three months	90 Day display (spread over six months) on 8 hoardings across 8 districts.

Radio	Effective means for influencing parents and other important social personalities, highlighting the DBR process and its benefits. A PR programme (interview or discussion) can be run covering all stakeholders.	Tied to project launch, and sustained for four months	Programme on national radio airing over 4 months (including PR programmes)
Street Banners	One of the best BTL mediums, covering complete districts/UCs to create awareness of DBR. Although banners have a limited life, they are the best medium to create awareness in any town/city.	Tied to project launch, and sustained for three months	Covering 500 banners per month per district
Posters	Covering DBR process, benefits and gatekeeper's information, to be made available at TP franchise, UC offices, grocery stores, and other places where parents congregate.	Tied to project launch, and made available for life of the project	10,000 posters
Activations	A team of activation agents perform a brief drama in local villages; the drama covers DBR topics well-mixed with local stories, and 'giveaways' handed out to remind people of DBR services.	Tied to project launch, and sustained for three months in each district	A team of van and 2 DBR registrars to be utilized for 60 days per district; approx. cost pr set up will be 4k per day

Appendices

Q # 1 : What is Digital Birth Registration (DBR)?

Q # 2 : Why was it needed in Pakistan (Digital Birth Registration (DBR))?

Q # 3 : Why Telecom operator is used for this project?

Q # 4 : Why a mobile phone is beneficial then any other device?

Q # 5 : Is this collaboration a CSV (creating shared value) or a CSR (Corporate social responsibility)?

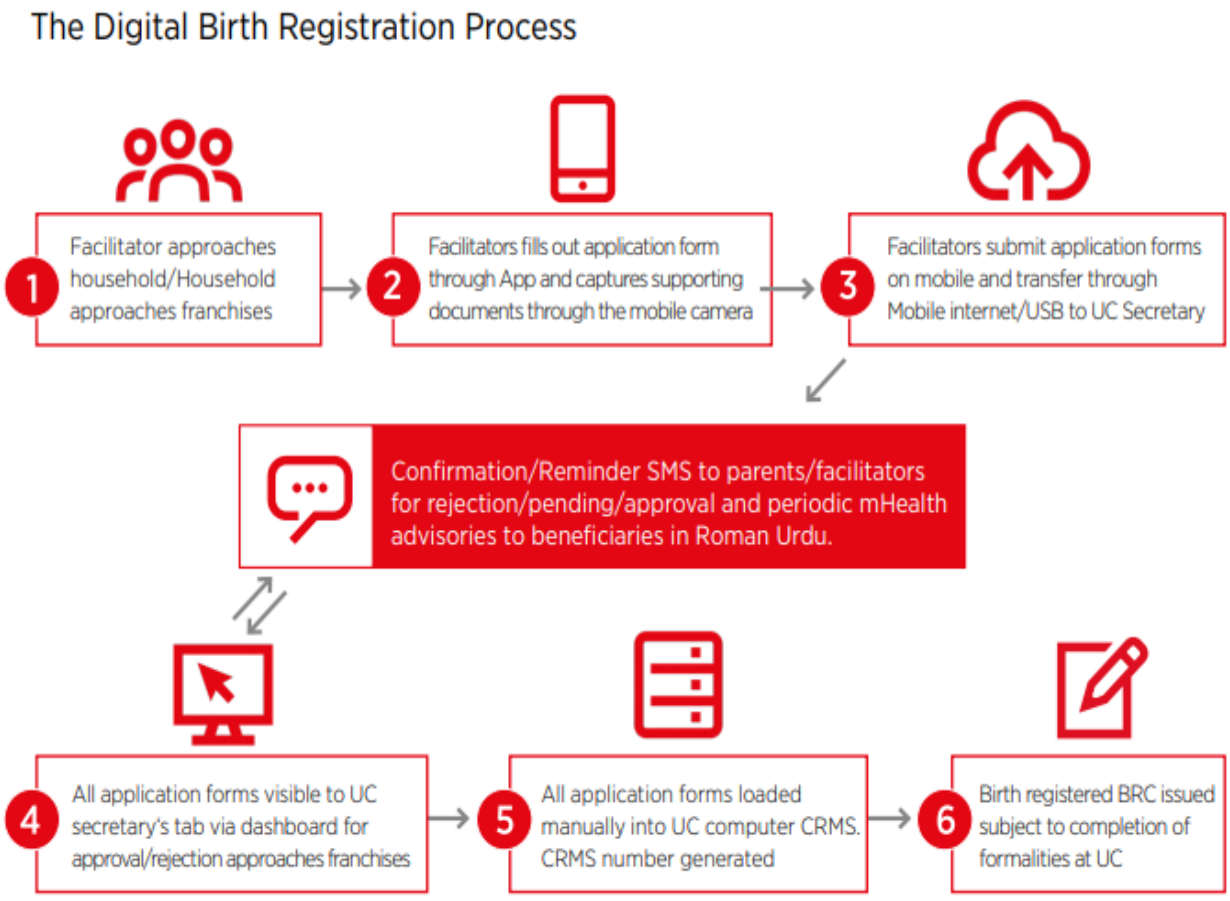
Q # 6 : What was the technology used ?

Q # 7 : What is the process flow used ?

Q # 8 : What are the benefits of digital birth registration?

Q # 9 : Are there any short comings ?

Q # 10 : What is the future of digital birth registration ?



DBR Mobile Application Steps

1. Install DBR app on the Smartphone of the Agent
2. Log-in with credentials
3. Agent selects Birth Registration
4. Agent fills details (including name, DoB etc.)
5. Information is sent to Union Council

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