

Digitalisation in the informal sector; through the lens of Kormo

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Abstract

Digital platforms have positively impacted the poor and marginalised households in Bangladesh with increased access to the job market and information. Among the many platforms available such as Pathao, Uber or Romoni, one of them operated in the informal sector; specifically with day labourers, called Kormo. Kormo, an app-based platform designed by Google's incubator program for innovative ideas, was piloted in the informal sector in 2016, in collaboration with BRAC Skills Development Programme (SDP). It was designed as an online job-matching platform for the underprivileged, targeting entry-level blue-collar jobs such as day labourers. Despite being led by two pioneers in their respective fields, integrating a digital solution in the informal employment spectrum came across various challenges. The project was afterwards redesigned for a relaunch using a different business model. The goal of this study is to explore the journey Kormo had in addressing the bottom of the pyramid in the job sector by introducing a digital solution and the challenges that came with it, which would open up new research scope and innovative ideas going forward.

Keywords: Informal sector, Digital platform, Online job matching

1 Introduction

According to the International Labour Organization (ILO, 2012), informal employment is defined as any work that does not consist of any formally regulated structures. Hence, workers in the informal sector do not have to pay any taxes on their income. On the other hand, the informality also excludes them from any social safety net programmes, resulting in having less job security and less likely to receive pensions, benefits or notice of termination.

According to the Labour Force Survey (LFS) 2016-2017 of Bangladesh, the informal sector employs about 85.1% of the total workforce (Mustafa, 2020). In 2010's Gross value added (GVA) of Bangladesh, more than 40% was contributed by the informal sector alone, involved in agriculture, fishery, trade, and industries which are less capital intensive (ADB, 2012). It was believed that the informal sector was essential for the survival of the extremely poor in developing countries and would gradually help them to be financially independent. Many policy analysts predicted that with the growth of the formal sector, the informal sector would eventually shrink but the opposite has been true in reality. Casey (Jonathan, 2017) has discovered that the urban informal sector has been irregularly growing even in cities of developed countries.

1.1 Issues in the informal economy

The nature of employment in the informal sector gives way to various market exploitation and inefficiencies which directly work against poverty reduction efforts. Informality creates a scope for a dual labour market to exist where short time hired workers are exploited with low wages and long working hours compared to formal contractual workers for the same work. The absence of a formal contract also exposes workers to poor, unsafe working conditions and no legal protection against accidents or sexual harassment. Firms are not required to maintain decent work conditions by law or provide workers with compensation or benefits in case of any accidents/injury. Workers in the informal sector are also excluded from any social safety net programmes such as health insurance or pensions. This makes them increasingly vulnerable to shocks to the industry or the economy (such as COVID-19).

A key issue in this workspace is workers are constantly suffering from a **lack of a stable livelihood**. Daily wage earners such as day labourers are

unaware of where they might get hired for the day, how much would they be able to negotiate for the price of their labour (as there is no set standard wage) or even how long they would be working for each day. Typically, these people would be gathering in market places or busy streets and wait to be approached by labour contractors to be hired. This is due to the lack of accessible information regarding job availability in the informal sector. The delay in matching the available workforce to appropriate job openings is an indication of market inefficiency.

One other issue that affects both the workers and the firms in the informal sector is that the workers usually **lack any proof of work experience**, making it difficult for firms to hire skilled workers without any evidence of their previous work experience. This impacts the workers more as they are unable to negotiate for higher wages for skilled work, showing proof of their previous experience. It is even more troublesome for workers who migrate to a new location - as there is no way to vouch for his/her skills in an unfamiliar environment where people do not know him/her personally or professionally. In most cases, he/she would again need to work up from the very bottom of his/her profession in the new site. Having a professional profile as evidence of skill is paramount to avoiding such inefficiencies in the labour market.

1.2 Formalisation through digitalisation

For developing countries, formalising the informal sector has been at the heart of many poverty reduction programmes. Even though the informal sector consists of the largest chunk of overall employment opportunities, these jobs usually lack any prospect of career progression or social protection. Since the rapid shrinking of the informal sector would result in more harm than good for developing countries, there has been a policy shift to focus more on removing barriers that prevent them from participating in the formal economy (Onyima and Ojiagu, 2017). According to (Rwelamila, 2017), when businesses in the informal sector have access to information and resources which are usually enjoyed by the formal sector, they metamorphose into formal businesses.

In recent times, the uptake of digital technology has enabled a large number of informal businesses to access formal opportunities, breaking the barriers between formal and informal businesses. These include services such as mobile and internet services, access to social media and websites, ATM, mobile money, and e-commerce services which enables online business and

payment (Amaka, 2015). These digital services are found to be sector blind, benefiting people who were previously excluded from the formal sector. Digital technology has also led to the dawn of innovative business models that can be used by both informal and formal businesses. This provision for inclusion has expedited the development of social entrepreneurship and increased access to information, customers, support services and overall eased formalisation of operation.

Digital platforms help to ensure a transparent, fair labour market and help alleviate some of the issues discussed in Section 1.1. Workers on a digital platform have better access to market information so they are aware of where to find decent work. They can be less exploited with differential wages as the base standard pay rate will be automatically established by the market and the transparency of a digital platform means they can compare what other employers are paying for the same work. Formalization through digital platforms also reduces the chance to pay discriminatory wages based on gender or race.

Digital platforms enable workers to have a digital profile which attests to their performance and skills. Good service receives good reviews from customers/employers, which in turn makes them more employable and earn more. Additionally, a digital profile provides evidence of the work experience of an individual which helps to identify them when they relocate to a new location or to negotiate higher pay.

1.3 Digital platforms in Bangladesh

The digital platform has become an integral part of the economy of Bangladesh, positively impacting both economic growth and employment creation in the market. There has been a gradual increase in the usage of these platforms such as ride-sharing services of *Pathao*, *Uber* and *Obhai*; food delivery services via *Foodpanda* and service-on-demand such as *Sheba.xyz*, *Romoni*, etc. to name a few. For our study, we wanted to focus on one such digital platform that addressed the informal sector (namely the day labourers) in our economy.

Kormo was an app-based platform which was designed as an online job-matching platform for the underprivileged, targeting entry-level blue-collar jobs such as day labourers. It was a one of a kind solution that targeted the bottom of the job pyramid and sought to make it digitally autonomous. Even though it had failed to operate in that employment space, there are

insightful lessons to be learned from its experience which we aim to explore in this paper.

2 Methodology

The data for this study has been collected through reviewing secondary information sources and conducting key informant interviews (KIIs). For secondary sources, information was collected from papers, reports and articles published by various national and international organisations. Blogs and op-eds from newspapers have also been reviewed. All secondary sources have been properly referenced.

For the KIIs, Bickey Russell; former Director of Global Operations at Google and various key stakeholders from Kormo Jobs Bangladesh have been interviewed for this study.

3 Literature Review

Introducing digital platforms for blue-collar and informal workers such as Brazil's *Emprego Ligado*, India's *Apna*, to *Lynk*, *Sweepsouth*, *Wesabi*, and *Fundis* across Africa creates an infrastructure of transparent, decent and safe employment where both the employees and employers benefit by matching skills and needs (Lisa and Dario, 2020). Digital platforms also pave the way to increased income for workers by reaching previously inaccessible customer pools and helping to upskill themselves through training and courses.

According to Chen and Haymon (Chen and Haymon, 2016), digital job-seeking platforms can accumulate large amounts of information on job seekers, employment opportunities and employers. For those at the bottom of the employment pyramid with limited professional connection, these platforms provide them an opportunity to participate in the labour force. It also helps to increase overall productivity by making the recruitment process easier by matching skills with the most suitable opportunity in the market.

In Kenya, where 83% of total employment consists of the informal sector, (Ndung'u, 2018) reports that the inclusion of digital job platforms in this sector has also created self-employment opportunities. As pointed out by (Nguimkeu and Okou, 2021), this additionally enables formalising informal sector jobs and helps the government in proper tax revenue collection and

allocation of proper public resources.

4 Kormo: A Brief Story

Kormo was an app-based platform designed to provide online job-matching for the underprivileged and marginalised people working in the informal sector. Bickey Russell, former Director of Global Operations at Google and a native Bangladeshi, conceived the idea of Kormo and pitched it on Google's Area 120 program. Google's Area 120 is an accelerator program inside Google for its employees to encourage entrepreneurship - to fund and pilot their innovative ideas.

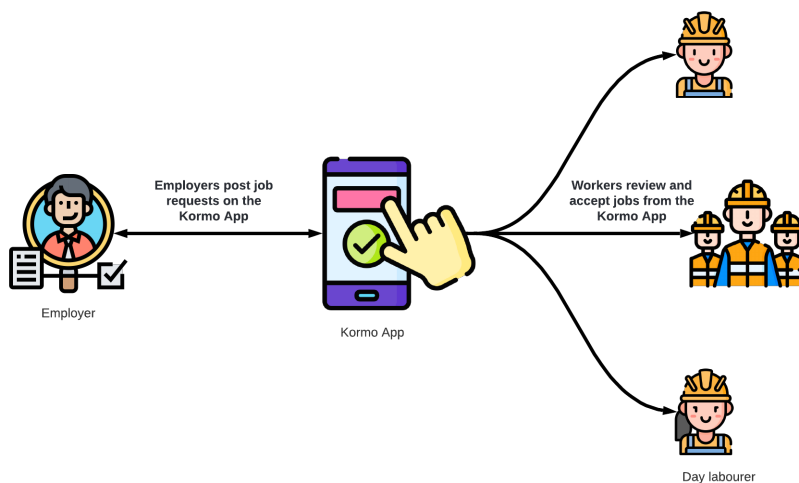


Figure 1: The process flow of Kormo during its conceptualization phase

How would it work?

The informal sector comprises the largest percentage of the job market and Kormo sought to formalise it, making it more equitable and transparent using technology. The android application would act as an automated job matching tool between employers and job seekers, both having created a digital profile on the platform with all required information (personal profile, skills and experience, etc.). When a job gets posted by an employer, the app would automatically notify the workers whose skills and interests align with

it, enabling them to accept the job after assessing all its details, such as the nature of work, pay and hours required. The process flow of the concept is given above (Figure 1).

What was Kormo's initial target market?

The informal sector consists of a vast expanse of occupations, but the target market for the Kormo App would initially be those niches where the minimum qualifications required for employability are easily verifiable and employers would also be able to find hundreds of workers that meet those requirements. Hence, automating the job matching process here would be fair and efficient for both the stakeholders. **Day labourers**; defined as unskilled workers who are hired and paid by the day, were an ideal choice for the piloting as their only verifiable qualification needed is being physically able to do manual labour. According to Bickey Russell, the market was also easily accessible to get the workers' information as there were a good 30 spots around Dhaka where day labourers used to gather in the morning to get hired for the day.

Kormo during its pilot phase

Kormo was piloted at the end of 2016 in collaboration with the BRAC Skills Development Programme (SDP). BRAC Skills Development Programme (SDP) specialises in providing hands-on apprenticeship and training to ensure better jobs for disadvantaged men and women. SDP acted as the local partner for the piloting of Kormo in Bangladesh and the first location that was selected was Notun Bazar, Dhaka. As per Kormo's finding, on any typical day, about 300 day-labourers would gather there early in the morning and wait for recruiters to approach them. Kormo's objective here was to eliminate the need for workers to wait on the street every day to be hired by contractors and get their daily work through the Kormo App at their convenience. To create the digital profile of workers, Kormo began building a structured database by collecting a set of information for each worker. Such as:

1. Basic information (Age, Sex, Contact No.)
2. Location of residence
3. Answers to custom-tailored questions for different categories of day-labourers, e.g. welder, bricklayer, rod labour, tile masons, etc. (This

was required to categorise the day labourers based on their specialisation)

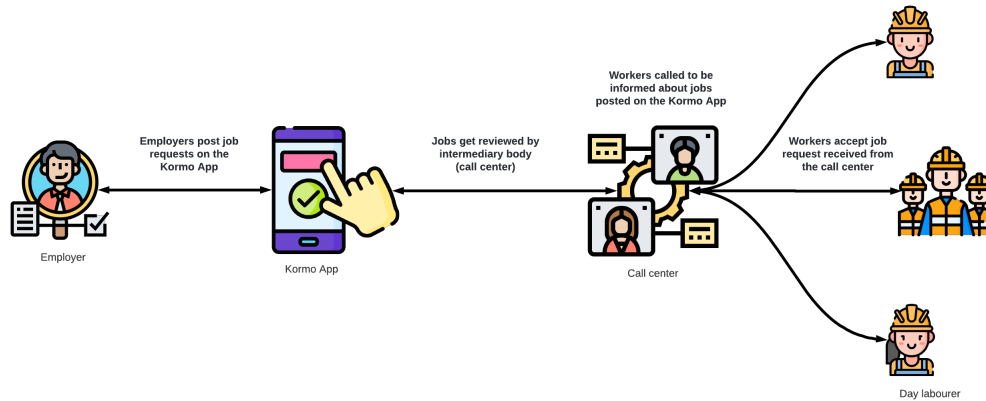


Figure 2: The process flow of Kormo during its implementation phase

Soon after launching the pilot, it became apparent that the mobile application was not widely accepted among the day labourers. To work around that, the Kormo team implemented a **call centric approach**, a number that employers would call requesting the type and quantity of workers they required. Job seekers who matched the required criteria would then be called to inform about the work offer. If they agreed to take on the work, then SMS notifications and confirmations by call would be sent to both employers and job seekers. This way day-labourers registered on the Kormo App would be matched with their daily work (Figure 2).

Essentially, this created an intermediary body between the employers and the job seekers, resulting in much of the work being manual. As Google's interest lay in the complete automation of this process, this was counterproductive. After some time had passed, the Kormo team had again attempted to integrate the day-labourers into the mobile application itself and remove the intermediary but that would not take. Therefore, after spending a year and a half on the day-labourer sector, the project was redesigned and re-launched using a different business model in September 2018. Kormo no longer works with day labourers now and has moved to a different target demographic.

5 Discussion

There is much to be learned from Kormo’s experience in working with day labourers as this segment of workers has much in common with the vast number of people employed in the informal sector. The challenges that were faced by Kormo would reveal critical issues that need to be addressed if we aim to successfully digitalise this bottom layer of the employment pyramid in the future. These would be discussed in detail in Section 5.1. We would also highlight the positive impacts Kormo had for the day labourers when it operated and take in lessons from various other digital platforms in Bangladesh, on how we can design better solutions for the informal sector. These would be examined in Section 5.2.

5.1 Challenges

Aversion to technology adoption

A previous study defines technology aversion or ‘technophobia’ as *“an irrational fear and/or anxiety that individuals form as a response to a new stimulus that comes in the form of a technology that modifies and/or changes the individual’s normal or previous routine in performing a certain job/task. Individuals may display active, physical reactions (fear) such as avoidance and/or passive reactions (anxiety) such as distress or apprehension”* (Khasawneh, 2018). Technophobia is more prevalent among people who are not digitally native (have grown up around technology) and they find ease in their old methods of operation. In Marescotti et. al’s (Marescotti et al., 2021) study with farmers, it was found that there is a negative relationship between the age of the farmers and the acceptance of new technologies. This was justified as older farmers’ have less interest in innovation since their prospect of career is shorter than young farmers. Education level also plays a key role as less educated farmers have lower confidence in learning new technology.

It was found during the piloting that both the employers and job seekers in the day-labourer sector lacked the digital literacy required to operate the mobile application with ease. Generally, this section of people are not sufficiently familiar with smartphones and the concept of service-based mobile application was still foreign to them. Google provided smartphones to Kormo’s top 40 reputed job seekers with the Kormo Jobs App installed and

trained them on its functions. Even so, they resisted adapting to the new technology and preferred their old manual process of getting recruited for work by waiting on the roadside of key points in the city. Or they would prefer to call Kormo's contact person regarding work rather than relying on the mobile application itself. With a pre-existing lack of digital literacy, learning a new technology can be emotionally stressful and for marginalized people, this triggers a feeling of incompetence. Hence, the Kormo App could not get enough traction among day labourers.

[Note: It was an interesting finding that the workers would use the smart-phones given to them for entertainment purposes (browsing YouTube or using social media apps) but would choose not to use the Kormo App. The phone call method of notifying them regarding work was preferable to them. So the resistance to technology centred around reliance on mobile applications for job/recruitment purposes.]

Failure in full automation of job-matching

In the day-labour market space, the job seeker and employer acquisition into the application was highly manual. Onboarding them on the digital platform, training them on its functions and periodically monitoring them on its usage were all manually intensive tasks. Subsequently, as technology adoption was still low, Google had to utilise a call centric approach to run daily operations which further defeated Google's goal of full automation. It does not utilise digital technology as Google envisions and if the operation was kept that way, the pilot model would be unscalable to other countries seeing how time intensive it was.

Google always aimed to eliminate the intermediary body (call centre) and onboard all the day-labourers into the digital platform fully - that is they would set up their digital profile, receive and accept their daily work from the mobile application by themselves. As a technology company, Google used to consider the unit cost of onboarding each day-labourer and matching them to a job. When they tried to completely shift over the workers to the platform, the unit cost would roughly increase 3 fold (as reported by Bickey Russell) for training the day-labourers on the functions of the app and then continue to follow up with them to ensure continuous usage. This increased cost made it unviable for Google to pursue complete automation in this sector.

Demand side issues

In the day-labourer marketspace, workers usually are employed under a sub-contractor who is in charge of a large number of labourers. From the Kormo teams' experience, they found that these subcontractors at times treat workers discriminately based on their locality and physical appearance. The digital platform was envisioned to make job-matching more equitable but when labourers were discriminated against after going to the workplace, they were dissatisfied with Kormo.

Another issue was the refusal of payment to the day-labourers if subcontractors were not satisfied with the work done, or in case of an accident or damage done to the property. This reduced the trust in the system for the workers as their payment agreed beforehand was not ensured. This also affected the employers' reliability on Kormo as any damage done by the workers to the property was not insured against. There was no guideline in place for such cases that would ensure both the workers and the employers that they would be properly compensated.

One digital solution that was exemplarily able to navigate around this issue is Sheba.xyz (Iris, 2019). Sheba.xyz is a digital platform that provides service-at-your-doorstep by connecting the consumers to their required service providers such as cleaners, electricians, movers, etc. When a consumer books a service, he/she already agrees to the price of that service. The Sheba.xyz platform then assigns a worker for that service and his/her payment is ensured by the platform itself even if the consumer does not pay. Similarly, in case of any damage to the consumers' property during the service or if the worker did not show up or complete the job, the Sheba.xyz platform takes the responsibility to properly compensate the consumer, either by monetary compensation or assigning a different worker. Through these methods, besides just providing peer-to-peer connection, Sheba.xyz took it upon themselves to deliver the trust and reliability of service on both ends.

5.2 Learning and Possibilities

It became evident through this study that it is essential to access the baseline digital literacy of your target beneficiaries and eventually strengthen their capacity for adoption when introducing a novel digital solution for them. Other novel digital solutions have seen much success in the context of Bangladesh just because they have targeted the proper demographic through market tri-

als. Notable examples would be Cookups (Ramisa, 2020) which provided an online marketplace for the delivery of home-cooked food and Romoni (Zora, 2021), an on-demand beauty service at home. These solutions were initially startups and operated on Facebook pages, where they could access the demand for their service and figure out if the target demographic was digitally proficient enough to transition to a mobile application based platform. It was after they had ensured that the market was ready to adopt an app-based solution, they launched their mobile application.

Successes of Kormo

The Komro pilot in the informal sector had several notable successes while working with day labourers, which were highlighted by Bickey Russell.

One of the metrics Google used to measure success was *Utilisation*. Utilisation is defined here as the percentage of employment a worker/labourer was able to secure through Kormo per week. When a worker enlisted in the platform, they were expected to get hired 5 days a week from Kormo. If they got hired 4 days a week, that was considered as 80% utilisation. At 80% utilisation, it was assumed that the workers would remain on the platform, so that was Kormo's target utilisation. They were successful in achieving that when they were operating using the call centric intermediary mode.

The other metric used was *Yield*. With the basic utilisation ensured, Kormo aimed to increase the workers' earnings per day (their yield) in the long run compared to before. It was found that a day-labourer who got jobs through Kormo, within about 6 to 8 weeks, was earning upwards of 30% more per day. It was because each worker had a digital profile on Kormo which logged how many jobs they completed and employee satisfaction ratings as well.

A digital profile enables a job seeker to attest to his/her skills and build a reputation for himself/herself. After each completed shift, workers' digital profiles would be enriched and his/her reputation would increase. Employers or sub-contractors then were willing to pay upwards of 30% more for workers who had a better reputation (jobs completed + ratings). This is very beneficial for job seekers in case they have to migrate to a new location where he/she would now be able to provide evidence of previous work experience.

Future possibilities

The favourable outcomes from the piloting of Kormo discussed above outline the merit of working further in the day-labourer marketplace. Perhaps, rather than deep diving into complete technological automation, a different approach could be used to address this disadvantaged section of the population. Taking on the lessons from how Sheba.xyz operated at the beginning where it was only a call centre which catered to the service needs of people (Iris, 2019), similarly, an agency could be set up that recruited day-labourers and then resold them to different workplaces at a premium, where the business receives a percentage and the workers also get their fair pay. So it falls on the agency to onboard the labourers manually, assess their skill level, train them and equip them with other complementary skills. The agency would then liaison with different subcontractors and workplaces, and provide them with reliable labourers on demand. This would result in a tech-enabled operation where you manage the job seekers, handle payments and train them by leveraging technology.

This would be able to eliminate the need for these workers to queue up on roads in hopes of getting hired, provide a more equitable and fair market where workers cannot be paid less than the market price and also provide a reliable supply of day-labourers to employers. The workers could also leverage the advantage of having a digital profile of their work experience and skills.

6 Conclusion

The merits of digital platforms in employment creation and introducing autonomy in peoples' lives are undeniable. Though it is challenging to digitalise the informal sector, through our literature review of platforms in other countries, and this study on Kormo's journey with day-labourers, it is clear to us that there are considerable benefits in doing so. Looking through the lens of Kormo, we have explored the various issues that might arise when trying to introduce a digital platform in the informal sector of the economy. Additionally, we have also noted how adopting elements from other promising digital platforms operating in Bangladesh can help to improve the next digital solution targeting the informal sector or the day-labourer marketplace specifically.

It is also evident that the reason Kormo was deemed as a failure in the

informal sector was that it failed to execute the highly autonomous, low-touch business model Google had in mind - much like how Uber operates in the ride-sharing marketplace where there is no need for any manual intervention. However, working with a population that had historically very low exposure to smart devices it is best to bring in digitalisation in phases, starting with first building trust on a digital platform using an intermediary such as the call centric approach used by Sheba.xyz to connect the workers and employers. Then afterwards build on that trust and train the stakeholders into adopting the digital solution, while also keeping a provision for the intermediary body to remain operational in case the adoption is stalled.

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