Mozambique: How informal workers find jobs through an app

There are only about 1 million jobs in the East African country. The majority of the population works in the informal sector, and it can be difficult for them to find customers. Biscate offers a digital solution--without the need for internet, data or smartphones.

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This article appears as part of our series on sustainable development goals and tech-based solutions from Africa, which we are discussing with an African-German community.

Minoca Adau Macucule leans over her freezer and pulls out a plastic container of salgados. The stuffed dumplings are one of her specialties, and they are well-known throughout the neighborhood. "Once someone has tried one, they immediately want me to cook for their next family celebration," says the 29-year-old. She lives in Maxaquene, a densely populated area of the capital city Maputo. Branching from unpaved streets, a maze of narrow pathways leads to homes like hers, lined with walls separating the small lots.

A talented cook finds new customers

Macucule lives here with her husband and her 2-year-old daughter. They share a small bedroom, and the door almost hits the plastic table next to the freezer. The kitchen is tiny: Between the gas stove, a small oven on a shelf, pots and bowls, there's barely room for two people. Macucule not only prepares meals for her small family here, but also for customers. And those customers don't all come from the neighborhood anymore. "I'll take the salgados later to a customer downtown," she says. When asked where she met the customer, she points to her smartphone.

Macucule can't remember whether it was five or six years ago when she happened to meet mobile phone company

Macucule with her daughter in her kitchen.

Salgados for a customer in the city.

The order ist packed for transport.

The house is hidden among a maze of alleyways.

employees who were promoting the Biscate digital platform. "The men said it would help me to find more work," she says. At first she was a bit skeptical, but she was quickly convinced. "There were many types of jobs to choose from. But of course I registered as a cook." She could even register with an old-fashioned cell phone - at that time she couldn't afford a smartphone. She typed in the code the men gave her as well as her name, city, work experience, and education. "They explained to me that customers can see this information and order something from me," Macucule explains. And, very soon, that's what happened.
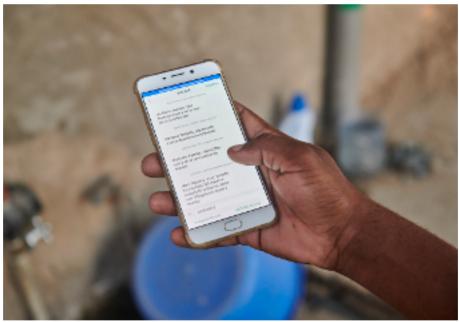
"Now I earn my own money"

Among her first customers was a Mozambican company that ordered salgados for a company party. Macucule notes proudly that the company even gave her "a real uniform" for the job. "That's when I realized that this was a serious opportunity," she says. To this day, she regularly receives calls from new customers who found her via the platform, and those who were satisfied recommend her. Business is really good, says Macucule. "I often cooked for the people in the neighborhood for free. Now I earn my own money by cooking."

As soon as she has agreed on the price with her customers,

she gets half of the money as an advance. She uses it to buy the ingredients and to pay for the trip to the city center in a minibus taxi. Payment is also made by mobile phone, using the *mobile service M-Pesa*. The service was developed in Kenya and requires neither a bank account nor a smartphone, both of which are rare in countries like Mozambique.

The customers call the service providers directly

In the nearby ward of Chamanculo, Mario Baptista is also preparing for his working day. The 26-year-old repairs and maintains air conditioning systems that are installed in many offices and private houses in Maputo's subtropical climate. After technical training in a company, he was unable to get a regular job and was forced to start his own business. Fortunately, he soon found out about Biscate over the radio. "My uncle, who used to do the same job, had to spend a lot of time looking for customers. It's easier for me: The customers see my profile on the platform and call me directly," he says.

Workers like Mario Baptista are notified via SMS when customers have requested their contact.

Workers and customers have been able to use Biscate since 2016. Since then, almost 70,000 workers across the country have registered on the platform. The majority of them are younger than 35. The platform was developed by the Mozambican start-up *UX Information Technologies*, which had previously launched the *Emprego* app, a digital job exchange on which companies can advertise vacancies and qualified job seekers can upload their profiles. But that only reaches a fraction of the entire job market in his home country, explains UX co-founder Tiago Borges Coelho. Mozambique is home to 32 million people, roughly 14 million of whom are part of the labor force, he says. "But there are only about a million jobs."

The UX office building in Maputo.

Many citizens have completed neither basic schooling nor any formal training. This means they can only access the so-called informal labor market. "These are workers who are not registered with the authorities, have no fixed income and no social security. They survive on odd jobs," Borges Coelho says. This informal sector is particularly large in less industrialized, agricultural countries. According to estimates, *it accounts for more than a third of the gross domestic product* in Mozambique. It shapes everyday life and the cityscape.

Mayny people advertise their services with hand-painted signs.

Biscate is a slang term for odd job. Workers from 18 different occupational groups can offer their services, including carpenters, tailors, upholsterers and beauticians. In contrast to their self-made signs hanging on trees or walls, their digital profiles are visible nationwide.

Question from 100eyes Community by Aishatu Muhammad Jibril, Nigeria: Does the Biscate team screen workers who register on the platform?
No. Anyone can register, and the information will not be checked. The barriers to entry are deliberately kept as low as possible. In general, however, serious workers quickly distinguish

themselves from unreliable ones, says Tiago Borges Coelho. People who do poor work soon don't get any more jobs. Each month, workers receive an SMS asking whether they will continue to use the platform. The profiles of those who do not respond are deleted. This keeps the database up to date.

Since it was founded, there have been over 314,000 inquiries from customers on the platform, and almost 24,000 jobs have been completed. The development was not about building a particularly fancy app, but about making access to the digital platform as easy as possible, says UX general manager Éder Paulo.

UX Information Technologies general manager Éder Paulo.

Messages can be sent between a mobile phone and an application in the network via "unstructured supplementary service data" (USSD), which is already included in basic phone contracts and doesn't require internet access or data. Settings can be adjusted using simple selection menus. "We chose USSD technology because it has the greatest range," Paulo explains. Through a partnership with one of the leading mobile phone companies, the UX team can even offer this platform free of charge - for workers and customers. This is crucial in a country like Mozambique, which is one of the poorest in the world. "Unfortunately, we still can't reach around 40% of the population, the poorest in our country," says Borges Coelho. That's because only 50 to 60% of the population have a mobile phone at all, and of these only 20% have access to smartphones and the internet.

Question from the 100eyes community by Gerhard Karpiniec: How is the company financed?

As with many start-ups, the founders financed part of it themselves from their savings. They also receive grant money. UX Information Technologies first developed the Emprego platform. Unlike Biscate, customers pay to use it. The company also generates income through consulting activities, for example for UNICEF or the World Bank. During the coronavirus pandemic, the team acted as a middleman: International organizations ordered masks, and the tailors were hired through Biscate. A recycling project was also implemented in this way. The model is simple, says Tiago Borges Coelho: "We let those who can afford it pay us and reinvest the money in free solutions for all those who have no money."

Mario Baptista belongs to this minority. He installed the app on his smartphone. This way he can see his profile and how the customers rated his work. There are three criteria for this: price, quality, speed and a comment function. His customers are extremely satisfied with his work, and they praise his professionalism, among other things. "It is very important that I get good ratings. It gives me confidence, and I get more clients," he says.

Biscate makes it easier for customers to find service providers

One of his clients is João Paolo Meque. He has found many workers through Biscate for various jobs around his house, he says. The experience was not always as good as with Mario Baptista. "But in general, only people who really need work and value quality are registered there. They know they will be rated and chosen for future jobs based on those ratings," Meque says. This makes it much easier for customers like him to find a worker. He used to have to rely on recommendations from friends and acquaintances.

Street *A street in Maputo, Mozambique's capital city.*

Maputo is on the coast of the Indian ocean.

The 41-year-old works in a courier company and at the same time is self-employed as a delivery driver. "If I'm too busy myself, I book a driver through Biscate," he says. As a result, he does not lose any orders and creates work for others. In bad times, he has also used the app to find jobs. "But things are going so well at the moment that there is no idle time," he says.

World Bank certifies the value creation potential

A *study by the World Bank from 2021* showed the positive impact of Biscate. The study found that the monthly income of the workers surveyed more than doubled on average after registration. In addition, customers were more likely to hire a Biscateiro than to do the odd jobs themselves. According to the authors of the study, these results are "an encouraging indication that the platform has the potential to add value to the economy and labor market of Mozambique."

Tiago Borges Coelho is of course happy about that, but the 40-year-old is also critical. He doesn't want any "exaggerated success story," but urges observers to remain realistic. His team regularly checks their data to better understand whether something is working or not. "When we started digging into the data, we realized that it's not 70,000 workers who are doubling their income" every year because of Biscate, he says. Instead 20% of users earned 10 times as much.In other words, only a small fraction of the users earn significantly more money. For many others hardly anything has changed. "This means that the majority cannot get the full benefit of our platform. That's in part because there are simply not enough work opportunities for everyone, but also because of the biases of the algorithms," explains Borges Coelho.

The system is constantly being adapted and improved to address such problems. As an example, he cites the fact that workers like Mario Baptista, who registered years ago and therefore have many more ratings, appear at the top of the selection list. "The bias is when the client is looking for a worker, they'll go for the guys that are on top," he says, rather than scroll down to find someone lower on the list. His team is now working to give new workers a fairer chance. For example, they may move newer users to a top list position for a certain period of time in order to make them more visible.

Overall, however, his team is very proud of what they have already achieved, he says. "In total, the registered workers receive about US$1.2 million every year via our platform," he notes. Considering that Biscate has no operational budget, "this tool is a huge accomplishment, right?"

UX cofounder Tiago Borges Coelho.

Biscate was able to win GIZ as a partner

The company is now in the process of expanding the platform. Workers can already register in many regions, but only near urban centers. "We also want to reach informal workers in rural areas. Our strategy is to first research the needs that people there have and what services are relevant to them," says Éder Paulo. GIZ, the German Society for International Cooperation, is a partner for this pilot project. Alexandra Oppermann heads a project at the GIZ office in Maputo to *promote the employment of young people in rural areas*. She was "immediately very enthusiastic" about the solution that Biscate offers because it also "supports people to formalize their work and develop themselves further."

USSD technology has a particularly broad impact

A pilot project is now taking place in the two provinces of Sofala and Nampula. GIZ initially carried out a baseline study

there, says Oppermann. The result: Fewer than 10% of the people have a smartphone and, due to widespread poverty, many cannot afford prepaid credit. "They then primarily use the flashlight and calculator on their smartphone," says Oppermann.

This is where USSD technology comes into play. "This is a technology that is very effective across the board because it also works with simple mobile phones," she says. The only prerequisite is that people have access to the mobile network. The pilot project therefore focuses on rural areas that are growing and where there is also some economic activity.

Of course, different kinds of services are needed in rural areas

Alexandra Oppermann works for GIZ in Mozambique.

than in the cities. GIZ supports UX in finding out which services could actually work there. As an example, Oppermann cites the pruning of cashew trees, which increases the yield for small-scale farmers. It's a "very good job for young people" because it's easy to learn and has a relatively large market despite the seasonality. "This is where Biscate comes into play as a platform, so that supply and demand can find each other," Oppermann says. She hopes youth will use Biscate in the future to find employment and income opportunities. Paulo speaks of expanding the range from the current 18 to 100 professional groups that are "tailored to the needs of the majority of informal workers in Mozambique."

"Poor people don't want to be treated like beggars"

This strategy distinguishes locally developed solutions like Biscate, adds Tiago Borges Coelho. "It annoys me when big, international development programs just assume they know what people need without consulting them." Labeling people

as beneficiaries deprives them of the ability to make decisions for themselves. The situation is different with companies that develop products according to local needs. "That way people get exactly what they need. A poor person wants to be a consumer. They don't want to be treated like beggars," he stresses.

His team wants to contribute to an overall change in the development sector and the power relations that prevail there. The fact that international aid organizations spend most of their budgets for staff and travel costs is not right, Borges Coelho says. "These NGOs make a lot of money from our poverty," he says. In addition, as a Mozambican, he has a different interest in improving the living conditions of his compatriots than someone who is only sent from abroad for a few years. In the end, the most important result is the measurable impact of the changes and how sustainable they are in everyday life.

Mario Baptista and Minoca Macucule have have increased their incomes through the Biscate app.

That's why the UX team is interested in direct feedback from customers and workers in order to further improve Biscate. For example, Mario Baptista would like the comment function to be improved. He keeps getting reviews from people for whom he has never worked, for example. In addition, the platform must be better advertised. "A lot of people don't know about it," says Baptista, even though the app offers a way out of poverty. "I made enough money to buy a house," he says proudly. He's still paying it off, but for many others such a purchase remains a far-off dream.
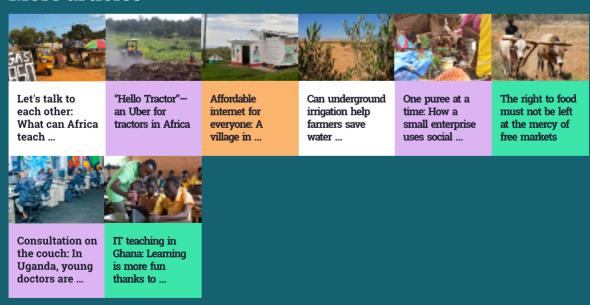
Financial independence empowers women

Macucule emphasizes that it is especially important for women to earn their own money. "It's bad to be financially dependent. You then have to ask for everything, even if you just want to buy something to eat or go to the hairdresser," she says. She purchased the freezer with her own income. Next, she plans to invest in a larger oven so that she can offer baked goods like muffins. "My business is growing little by little. Sometimes I have so many orders that I ask a friend to help me, and we split the money," she says.

Maybe one day she will be able to afford her own team, and then she could employ other Biscateiros. In any case, she does a lot of advertising for the platform: "I say that everyone, women and men, can register. You don't have to work for someone else. And anyway, jobs are hard to find. You can find work through Biscate and make money on your own." Her experience shows that this is possible. Macucule grabs her bag and the packed salgados, takes her little daughter in her arms and sets off to meet her customer.

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