



How the Rural-Urban Divide Plays Out on Digital Platforms

Urban entrepreneurs on digital platforms have access to better offline information, which gives them an edge over rural entrepreneurs.

In the West, villages are emptying out due to the lack of economic opportunities. Consider Italy where, in a bid to attract newcomers, a handful of municipalities have turned to selling **houses for €1**. Meanwhile, in some developing countries, the digital revolution has created a path for villagers to earn a living through online selling. To wit: About **40 percent** of online entrepreneurs in China live in a rural area.

It is one thing for entrepreneurs, whether urban or rural, to create and operate an online store, as some platforms have made it relatively easy to manage an e-store – even by using just a **smartphone**. Perhaps the most troublesome aspect of online selling is that platforms frequently tweak their algorithms. This requires entrepreneurs to keep up with these changes and constantly adjust their strategy. If not, their products may never surface in customer searches.

The next problem is that platforms do not always communicate the changes in the most straightforward manner, leading to confusion among entrepreneurs. As I show in my paper, “**Platform governance and the rural-urban divide: Sellers’ responses to design change**”, co-authored with **Charles Easley**, compared to rural entrepreneurs, urban entrepreneurs have access to offline sources of information that helps them see through the veil

quickly. This advantage can lead to lasting gaps in performance.

The Offline Interface: In-person communications still rule

For online business and digital platforms, my research highlights the importance to understand the *offline interface* – a term I use to describe the local, offline factors (be it economic, social, cultural or political) that affect users’ ability to navigate a digital environment.

In most countries, online entrepreneurs on digital platforms usually start out as scavengers, either making their own products or pulling excess supplies from their environment (e.g. factories). You see this phenomenon on a number of e-commerce platforms, such as Lazada and Shopee in Southeast Asia. Entrepreneurs sourcing from nearby factories might sell socks, car radios and baby products, whatever assortment of products they manage to line up – or figure out what might sell based on a recent fad.

In May 2013, a prominent e-commerce platform in China was trying to increase the professionalism of its sellers (entrepreneurs) by encouraging them to specialise in a single product category. The goal was simple: Over time, entrepreneurs would

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become category experts able to provide top-level customer service. To achieve this, the platform modified its algorithm to prioritise entrepreneurs who sold many products within one or two product categories (a characteristic termed “category focus”).

However, the platform had difficulty conveying this change to entrepreneurs. A somewhat cryptic announcement said that Big Data would be used to construct buyer profiles and that a new algorithm would “help entrepreneurs lock onto potential buyers and implement targeted marketing”.

Poor communication such as this is common. While hiring better communicators might help, the reality is that transferring complex information to others is more difficult than it looks in the online world. First, people do not always check their inboxes. Email announcements are the poor cousins of the communications family anyway, as they tend to be text-only. They may be crafted in a language that is poorly understood by much of the intended audience. If recipients see questions that need to be clarified, they can neither request nor receive immediate feedback.

As media richness theory has shown since the 1980s, communications that are richer in cues and more personalised, such as in-person discussions, are significantly more effective at helping decode potentially confusing messages. If I were to tell you about my research findings, I would probably do a better job sitting down and talking to you face-to-face than via this article alone.

Rural entrepreneurs are left to figure things out by themselves

Let’s go back to the Chinese e-commerce platform. Based on our study of 2,395 randomly selected entrepreneurs, the sales of rural and urban entrepreneurs were on par before the algorithm change. In fact, rural entrepreneurs, which comprised nearly 40 percent of the sample, sold a little bit more. But after the tweak, rural entrepreneurs actually went in the wrong direction by decreasing their category focus. This sank their stores’ rankings and resulted in sales that were 24 percent lower than those of their urban counterparts.

After four months, rural entrepreneurs had caught up in terms of category focus, but their sales remained inferior. This suggests that algorithms rewarded the entrepreneurs who “solved the puzzle” early, and that advantage was sustained over time.

Among urban entrepreneurs, guess who were the best performers? Those nearest to the platform’s

headquarters. Their category focus *doubled* after the algorithm change. Moreover, it is telling that the biggest predictor of an entrepreneur’s behaviour was not what their same-category competitors did, but what other entrepreneurs in their physical vicinity did.

In an online environment filled with irrelevant, vague and even false information, entrepreneurs can often be led astray. In such situations, the offline interface is all the more relevant: Knowledgeable sources of information in the local environment can help entrepreneurs address points of confusion and devise the appropriate strategy. Rural entrepreneurs are not dumber than their urban counterparts. Their local, offline networks just don’t give them access to the same quality of information.

What are examples of high-quality information sources? Our field research in China showed that discussions with experts – often former platform employees or individuals connected to platform designers – were important for entrepreneurs’ success. Self-organised learning groups are also more prevalent in cities. Yet, these opportunities to acquire valuable information were less available in rural areas.

We also met rural entrepreneurs who would take a long-distance bus to cities in order to learn more about the latest platform direction. As a rural entrepreneur told us: “Oftentimes, many rule changes on the platform are quite subtle and hard to interpret. But there are these platform gurus in Beijing, who can see through the veil. You must go on a ‘pilgrimage’ to obtain the ‘holy scriptures’ from [them].”

These examples also bring to mind a study on Airbnb that showed that in cities like London and Los Angeles, Airbnb hosts have started meetup groups to discuss best practices and cope with what researchers coined “**algorithmic anxiety**”.

Second-order inequalities

The first order of inequality in the digital economy is internet access. A number of initiatives are trying to fix this inequality, for instance the **Next Billion Users projects** by Google. But if we look at third-party entrepreneurs on a given platform, they theoretically all have the same ability to reach the wider markets. Geography is not supposed to matter. Except that it does.

In practice, information asymmetry due to offline differences is common. This poses a major issue for platform governance, which is not unlike what governments face when implementing new policies or new regulations. Rumour spreading is always lurking if great care is not taken to convey messages

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in ways that various audiences will understand. Even in the absence of rumours, certain audiences might still be unable to understand a new regulation.

My research suggests that, before implementing major algorithmic changes, a platform needs to study its audiences carefully and assess their diverse information needs. Users (or participants) in isolated geographic areas need special attention. This could mean creating learning groups with experts from nearby cities or sending clarifying messages or videos in a targeted manner, in which case the platform needs to implement well-designed pre-testing. The platform could also help information-disadvantaged participants by creating ranking algorithms that do not rush to punish those who fall behind on day one. In other words, algorithms that are less dependent on previous performance could better enable certain disadvantaged participants to adjust to a new platform order.

Is our research only applicable to China? Far from it. It is very relevant for the planet's **3.4 billion rural dwellers**, who represent a vast pool of potential entrepreneurial talent for the digital economy. You may first think of developing countries, but most first-world economies also have rural areas that need to be revitalised. In some American states, such as **Ohio** and **Kentucky**, young talent leaves and never comes back. Online entrepreneurship could help lure talent, but it is important to promote a rich local information environment in these communities to nurture it. These lessons are especially valuable for a post-Covid world in which many will exchange information in an online-offline hybrid fashion.

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