Digital modes of music circulation in India: From vernacular music archiving to extralegal music vending

Dr. Aditi Deo

Indian Institute of Science Education and Research, Pune

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This report discusses the research and findings of the India component of the Music Digitisation Mediation (MusDig) project headed by Prof Georgina Born at the University of Oxford and funded by the European Research Council. The MusDig project, conducted between 2010 and 2015, is an interdisciplinary study of digital technology-related transformations in diverse musical contexts in six countries. The research in India focused on oral vernacular musics and non-metropolitan contexts to examine the impacts of digital technologies for music recording, storage, circulation and consumption. It examined two distinct phenomena. The primary focus was on (1) digital documentation/ archiving and the framing of oral vernacular music as heritage in the present day.[1] A smaller question addressed (2) the proliferation of portable playback devices (mobile phones, USB players, etc.) in rural and semi-urban India.[2] The multi-sited ethnographic fieldwork was conducted by Dr. Aditi Deo in 2011-12 in parts of northern and western India—in New Delhi and the states of Rajasthan, Maharashtra and Gujarat.

Section 1: Digital documentation/archiving of oral vernacular music traditions

This section of the report summarizes the MusDig research on the renewed attention to oral vernacular musics as valuable resources in present day India, and its expression in practices of their digital documentation. Oral vernacular music, discussed more commonly as folk and tribal music, has played a significant role in shaping imaginaries about the nation and the regional over the past century-and-half in India—both during the

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[1] An expanded account of this research will appear in 2016 as a chapter in a collected volume emerging from the project.

[2] This research was conducted with assistance from Vebhuti Duggal, PhD candidate at the Jawaharlal Nehru University, New Delhi. A paper based on it was presented at the MusDig conference in July 2013 and is now in preparation as a journal article.

British colonial period as well as after 1947, in the independent nation. The categories of folk and tribal music, as part of traditional expressive culture, are crucial components of what is described as India's cultural heritage, and are deployed in contexts as varied as state ceremonies to political movements centered on regional identity. One key mode for the valorisation of these forms has been their documentation by state, semi-state and independent archiving initiatives over the course of the history of audio recording technologies in India. During the past decade, such activities have been increasingly framed at the intersections of discourses, on the one hand, about identity, development and heritage, and on the other hand, about the potentialities of digital technologies for documenting and disseminating. Since the early 2000s, charitable agencies including the international Ford Foundation and Prince Claus Fund, the India-based Tata Trusts, as well as the Indian state have provided support for digitisation of established collections and for new initiatives for digital music archiving. Simultaneously, the permeation of consumer digital technologies in rural and semi-urban regions have invigorated informal and independent activities of music documentation, especially where oral vernacular forms are key to local identities.

Our ethnographic investigation into this subject included a range of archiving initiatives in parts of northern India. We focused in particular on: the Archive and Research Center for Ethnomusicology (ARCE) in Gurgaon in the national capital region of New Delhi; the Lokayan Sansthan in Bikaner, Rajasthan, and its collaboration with the Bangalore-based Kabir Project; and the Vaacha Museum and Archive at the Adivasi Academy in Tejgadh, Gujarat. Two kinds of vernacular music were at the hearts of these archives: during my research, ARCE's as well as Lokayan's work was concerned primarily with the music of hereditary folk musicians in Rajasthan; Vaacha was documenting the music of tribal communities in Gujarat. The ethnographic research aimed to trace the drawing in of these distinct musics into technological networks, the kinds of symbolic values posited on them, and the discourses and materialities that shaped practices of vernacular music archiving. In forming a multi-sited approach, we sought to understand the impact of technological shifts in contexts that were varied in institutional structures, scales of influence, technological expertise and relationships to the musics in focus. Through the

three case studies, we examined the diverse ways in which archiving initiatives forged connections between their political/aesthetic positions on vernacular musics, their perceptions about digital technologies, and their specific technological and social resources. Examining these initiatives allowed insights also into the configurations of power, persuasion and affect invested in oral vernacular musics in India today.

Our research suggested that the perceived imperatives that led to projects for music documentation/archiving/dissemination were linked as much to current discourses about the significance of vernacular music as to digital technologies and their perceived affordances. The imperatives reflected, to a large extent, the paradigm of 'digital heritage' that is increasingly popular globally in the contexts of museums, archives and other cultural institutions engaged with traditional cultural forms. Digital heritage[3] suggests that local traditional practices have a universal significance and emphasizes the affordances of digital technologies for both their preservation/dissemination and for democratisation of cultural access (Cameron 2007). In our research, we found a similar juxtaposition of the valorisation of the oral vernacular domain and the promises of digital technologies. On the one hand, documentation initiatives highlighted the significance of vernacular music thus: specifically, through heritage discourse and concerns about fading music traditions—the necessity to record, preserve and disseminate that which would soon vanish from cultural memory; and more expansively, through discussions about the significance of 'culture as resource' (Yudice 2003:2) for the strengthening of civil society and democratic development. On the other hand, digital technologies—the increasingly affordable and easy-to-use devices for audio-visual recording as well as the online/offline digital archives that allow storage and access to audio-visual files—vitally shaped documentation initiatives, both as concrete technological tools and as discursive devices in attracting interest and resources.

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[3] As described by UNESCO's Charter on the Preservation of Digital Heritage, digital heritage is: "inherently unlimited by time, geography, culture or format. It is culture-specific, but potentially accessible to every person in the world. Minorities may speak to majorities, the individual to a global audience. The digital heritage of all regions, countries and communities should be preserved and made accessible, so as to assure over time representation of all peoples, nations, cultures and languages" (UNESCO 2003:76).

Keeping the ethnographic material at its core, this report discusses three dimensions of the imbrication of digital technologies in the archiving of oral vernacular musics. The first dimension pertains to the significance that the prevalence of digital technologies has posited on these musics. Ana Maria Ochoa (2006), in her elaboration of the notion of an 'aural public sphere,' states that in the present contexts, with the intensification of digital technologies of sound together with communicative intermediality, aurality has emerged as an alternative form of participation that offers possibilities for displacing the textual and lettered nature of the public sphere. As a result, oral traditional forms have assumed particular significance, with their documentation being recognized as a mode also of political participation. Consequently, a range of actors—from the transnational to the local—have become invested in such projects. With the aid of digital technologies, the creation of audio-visual collections and the aspiration to reach wider audiences has expanded from centralized archives to also include local cultural activists and practitioner communities. A second related dimension, then, addresses the manners in which spaces of vernacular music documentation and archiving structure social relationships between these varied actors in new ways. The third dimension that I discuss is concerned with the diversity of technological practices adopted in documentation and archiving initiatives. A crucial effect of the technological shift from analogue to digital in such projects has been the increased focus on access/dissemination of recordings as a primary goal in contrast to the previous emphasis on documentation/ storage. While established institutions grapple with the digitalisation of collections in prior formats, new initiatives often work with born-digital material; the technological modes in these varied contexts range from international standard practices to local consumer technocultures.

Digital technologies and the vernacular domain: Political possibilities

A vital part of the imaginary of digital technologies is the possibility that 'minorities may speak to majorities' (UNESCO 2003:76)—that is, the notion that the digital allows for democratic participation not only in consumption but also in the circulation of cultural forms. This perception translates to two kinds of policy discourses that shape the

engagement with oral vernacular musics and their documentation/ archiving/ dissemination for both funding agencies and cultural initiatives. First is the idea of digital heritage that I briefly touched upon in the previous section. The second is the paradigm of Information and Communication Technologies for Development (ICT4D) that promotes the use of ICTs for the benefit of marginalised populations—in the Indian context, with special reference to non-metropolitan, rural populations (Sreekumar 2011). In both cases, sonic technologies and aural modes of participation have emerged as valuable means of communication and participation.

Concurrently, the interest in folk and tribal musics as expressions of India's traditional cultural diversity has also become intertwined with explicit discourses about the political significance of such musics. Hereditary performance genres from Rajasthan, appreciated for virtuosic performances of their practitioners and regarded as the quintessential Indian folk music, were at the heart of two key projects in the India research—the ARCE's Archives and Community Partnership with Manganiar and Langa musician communities, and the collaboration between Lokayan and Kabir Project with Dholi women musicians. Given that several customary music practices in Rajasthan blur the boundaries between Hinduism and Islam, both the projects framed the value of these folk musics through philosophies of religious syncretism in response to recent history of communal disharmony in parts of India.[4] The Vaacha museum-archive in Gujarat was part of the Adivasi (tribal) Academy that had been established with the overtly political goal of self-representation on the part of tribal groups. While the music that they documented was not seen to signify a political position, it was the participation of Adivasi archivists in central roles in shaping the archive that aligned Vaacha's activities with wider movements for tribal self-representation.

In addition to attending to vernacular music genres, state and non-state grant-making agencies in the past decade have also taken into consideration how the emancipatory

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[4] Further, a transnational influence in such framing of these music was that both projects had received support from the US-based Ford Foundation, whose global policy concerns at the time of the grants (early 2000s) included religion as a mode for promoting pluralist democracy (Ford Foundation Annual Report 2003, 2004).

potentials of digital technological access may be used to also closely involve practitioner communities. Activities that received support included the setting up of community archives, creation of digital exhibits, duplication and repatriation of collections, decentralized documentation by practitioners and local patrons, sharing of recordings in both online and locally through offline modes, etc.

Structuring of social relationships around technologies and music

The burgeoning of documentation/ dissemination projects of varied scales also provided new spaces and ways for the articulation of relationships between musicians, musics, archivists, audiences and technologies. Emphases on equitability, collaboration and bridging the local with the transnational accompanied the digital socialities of vernacular music archiving (and often project funding as well). Technological access and the ethos surrounding such projects encouraged diverse subjectivities—most crucially, communities of practice such as the Manganiar and the Adivasi—to engage in vernacular music archiving as a mode of identity assertion, as an 'aspirational practice' (Appadurai 2003). At the same time, in spite of these political goals, inequities and hegemonies that were part of existing social fabric were reproduced in interactions between the various actors. Diverse contradictory influences—ranging from the ideological bases of transnational and national financial support that I touch upon in the previous section to social modalities such as class, caste, age, gender—mediated which musics were identified for valorisation, the control different actors had in shaping the documentation process, and how the musics may be represented for local and wider audiences.

The divergent positions were most apparent at the micro-social levels where global discourses and resources were juxtaposed with local ontologies of vernacular musics as well as documentation practices. For instance, ARCE's community-led Archives and Community Partnership project had differing implications in the two states where it was conducted—Rajasthan and the state of Goa in western India. The ACP work in Rajasthan was nurtured by the relationships ARCE had sustained over several decades with Manganiar and Langa musicians as well as by wider histories of the links between

musicians' livelihoods and archiving. Musicians had multilevel investment in music archiving: to create a historical record in the context of changing performance repertoires and milieus; to serve for pedagogic purposes; and as having the potential to enhance audience exposure for their music. The implementation of the ACP project in Goa, on the other hand, was variable with the process of documenting and archiving eliciting questions such as community rights over the music, modes of remuneration, and which performers merited being recorded.[5] A close examination of Lokayan's recording practices with musicians in Bikaner, framed by national and transnational discourses of religious pluralism, revealed that philosophies that idealized the vernacular were juxtaposed with differences based on age, gender, caste and technological literacies that were expressed in interactions during the recording process. For archivists at the Adivasi Academy in Tejgadh, practices of recording, archiving and circulating their music—that is, of musical and cultural self-representation—were as important as their direct engagement with technologies as a means of acquiring coevalness with the wider Indian society.

Technological materialities

Scholars have suggested that the affordances of digital technologies, especially the manners in which they structure information, knowing and memory, in themselves suggest 'new futures for our pasts; the past and present are increasingly thought through in terms of future access and preservation' (Taylor 2010:2). As is apparent in the diverse case studies that are part of this research, the promises of opening up archival collections through their digitalization, and of creating new digital documents for dissemination to wider audiences have inspired a plethora of initiatives in India, as globally. Perceptions about appropriate technological modes for preserving and disseminating music, and the deployment of varied technological tools in these activities spanned wide spectrums.

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[5] As communicated by ARCE director Dr Shubha Chaudhuri, the ACP work in Goa engaged with three kinds of Gavda communities, of which one expressed appreciation of the project's impact in emphasizing the value of traditional forms and in promoting live performance practices while the other two remained agnostic as to the value of archiving music.

At ARCE, a meticulously designed archive that adheres to international archiving standards, digitization had begun with their pioneering use of pulse code modulation (PCM) to record audio as digital code on VHS tape in the 1980s when very few archives globally were thinking about digitizing their analogue recordings. Over the years, ARCE continued to maintain its exacting standards, gradually digitizing its collections to a RAID (Redundant Array of Independent Discs) system with LTO (Linear Tape- Open) backup and developing systems for digital metadata. In recent years, it also engaged with various forms of dissemination platforms including partnership with the Smithsonian Global Sound, an online music store launched in 2005 by the US-based Smithsonian Folkways, the publication of CDs of archival material, and more recently the development of a website for their Goa ACP project and a mobile phone application for Manganiar songs. The comparative technological ease of providing access that accompanied the digital, for ARCE, implied also the need for careful attention to intellectual property rights and permissions from rights holders (musicians, collectors) especially in the contexts of vernacular musics.

The Lokayan initiative at Bikaner and its collaboration with the Kabir Project were intrinsically shaped by the particular digital technologies at their disposal. For Lokayan, the notion of generating an archive was in reference to the digital documentation that, through the Kabir Project's projected online curation, would eventually be made accessible and put into circulation. The technical culture of archiving at Lokayan was an extension of its members' practices of consuming music and media technologies. As middle-class youth in semi-urban Bikaner, their technological ecology transitioned fluidly between electric load shedding (regulated cuts in power supply), use of informal and extra-legal music markets, and ownership of relatively elite objects such as laptops and Internet dongles. Beginning initially with a consumer-grade MP3 recorder, they later began to use a portable Sony digital audio field recorder. The digital archive that emerged was stored on a member's personal laptop and hard drive, and was occasionally relayed through email and Dropbox to the Kabir Project's Bangalore office for backup. In contrast to ARCE's preoccupation with the confidentiality of archival holdings, security precautions in online circulation were not of concern to Lokayan. Indeed, vernacular

musics, as a community form, were regarded as belonging within a public domain and therefore to be made freely accessible. As such, Lokayan members eagerly posted recordings made for the archive on Youtube and other media websites. For the Kabir Project, the vision of its online archive was further different. Even as it worked with resources comparable to ARCE's, its use of digital technologies was guided not so much by the former's concerns with legality, access, permissions and metadata, but by the possibilities of encapsulating a range of musical experiences and information online. The archive was planned as a creative and academic project, crafted to provide access to well-researched and curated content as well as a multilayered aesthetic experience using multimedia interfaces, diverse media objects (texts, images, audio and video recordings), and a navigation scheme allowing nonhierarchical searchability.

The documentation of Adivasi songs and music at Vaacha presented yet another mode of deploying digital technologies. The archive had begun as a collection of commercial cassettes and CDs of vernacular popular musics in Gujarati and local Adivasi languages—a rapidly changing and rarely preserved set of recordings. Soon after, a plan to transcribe Adivasi songs developed into a formal audio-visual documentation project. Since 2010, three Adivasi archivists had collected about a thousand hours of digital audio and audio-visual recordings of oral tribal traditions in the region. Vaacha functioned as an institutional archive; however, given its very different conditions, there were clear contrasts with archiving practices at ARCE. Unlike the environment-controlled spaces of the ARCE archive, the Vaacha archive had neither air-conditioning nor security. The audio-visual collections were housed in a small room at the Academy equipped with two computers and two metal cabinets filled with cassettes, VHS tapes, MiniDVs and hard-drives. Concerns about appropriate technologies for archiving were limited to a basic instrumentality about recording and storage. Locally available digital technologies were also integral to the initiative. In 2011, Vaacha archivists had distributed CDs of Adivasi song recordings published by them among drivers of shared shuttle vehicles in the region. The intention was that, similar to vernacular commercial musics, the drivers would play these songs in their vehicles as they transported passengers; gradually, through the mediation of mobile phone users and music download vendors, the music would

repeatedly be replicated and disseminated widely. (I discuss the context of download vendors and mobile phone users in the next section of this report.)

Section 2: Music circulation on portable playback devices in non-metropolitan India

This section of the report discusses the smaller sub-project in India that focused on the impact of (now ubiquitous) digital portable playback devices such as mobile phones, MP3 players, etc. on consumption and circulation of music primarily among non-metropolitan audiences in parts of northern India. Digital modes of music consumption began to become popular in India in early 2000s, when analogue cassettes began to be replaced by CDs, VCDs and DVDs; soon after, portable digital devices based on flash memory were introduced. At the time of the ethnographic fieldwork in 2011-12, cassettes as well as electronic media continued to be used, however they were a non-viable market and gradually disappearing. The music economy was shifting rapidly towards portable digital devices, and music in the form of digital audio and video files circulating in offline networks (with limited Internet usage). The ethnographic fieldwork for this research included observations in busy market places in urban villages in metropolitan New Delhi and the smaller towns of Bikaner and Tejgadh, as well as short interviews with vendors and listeners of digital music.

The research took as its point of departure two sets of concerns: The first pertained to grey economic practices that extended from prior technological formats such as cassettes and electronic media (Larkin 2007, Manuel 1993, Sundaram 2009). The second was related to the implications of music's mobility, now augmented by mobile phones and USB players, for consumption practices (e.g. Bull 2006) and its particular inflections in a non-Western and non-metropolitan sociality. The report addresses three closely interrelated dimensions that shape music circulation in these contexts: The first section elaborates on the implications of the materiality of digital music; the second section is primarily about the social networks centered on music consumption; and the third section is about related informal (and formal) economies.

Music's digital materiality in offline networks

By the time of our research in 2011-12, producing and selling digital media such as CDs, VCDs and DVDs was rapidly becoming economically unviable, given the ease of extracting music audio and video from them as well as the Internet. Moreover, portable digital devices including cheap multimedia phones and USB players were increasing in popularity among lower middle-class consumers. As such, also among these audiences, the key mode of music consumption had shifted from electronic media to digital files. The Internet usage in India in 2012 was 11% and primarily accessed through computers rather than mobile phones (a statistic which has rapidly increased to a projected 19% in 2015). Retail customers often obtained digital music in file formats from vendors who sold music downloads. The figure of the download vendor had emerged as a pivotal node in the network of music circulation in these contexts. Largely an extralegal and transient practice, vending was part of neighborhood markets or mobile phone service stores.

Vendors specialized in building large inventories of music audio and video files, grouped together with other kinds of pirated digital items for sale—wallpapers, games, software and films (at times including pornography). Their collections emerged crucially to cater to listeners consuming music specifically on mobile phones and other portable devices, conversely also shaping the kinds of music that circulated in these networks. The collections predominantly included music produced in mainstream film industries in Hindi, Tamil, Telugu, Kannada, and Bhojpuri languages, music audios and videos produced in diverse vernacular languages, and to some extent, Western popular music. Core parts of the collections were shared among vendors—particularly Hindi film songs and locally popular regional music. These collections, on the one hand, normalized unexpected musical juxtapositions, especially between vernacular musics with distinctly localized production and distribution histories. At the same time, they often excluded certain canonical elements of popular Indian music—most remarkably Hindi film music produced prior to the 1990s. Further, the collections also introduced reorganization of music in creative genres based on customer requests: sad songs, songs of betrayal, '*beechwale*' or the 'middle' songs—i.e. Hindi film songs from the decade of 1990s, etc.

Music was often sold not as songs or albums but in bulk portions of gigabytes. Given the reliance on memory cards as storage devices, the concern of both vendors and consumers was the quantity of music—the number of songs that they bought—rather than acquiring high quality audio or video. Vendors cultivated technological literacies in converting movie and music from large files to smaller, mobile-phone-friendly formats. Since the most common way for exchanging music between mobile phones was via Bluetooth, small file sizes were important also for offline music circulation among listeners. Vendors usually owned a laptop or computer and were connected to the Internet, locating them as key mediators: first, between online and offline networks of music circulation; and second, of materiality, converting music audio and video files to formats suitable for consumption on multimedia phones, memory cards, USB drives, mp3 players.

The sociology of music consumption

The buying and selling of digital music in these contexts was a largely gendered space with primarily male vendors, storeowners and customers, even as listeners included both males and females. Digital music circulating in such offline networks was also undoubtedly a preoccupation of the youth; listeners included those the age of forty—students, semi-literate workers and housewives. A prominent demographic of listeners, especially in New Delhi's urban villages and semi-urban Bikaner, was migrant workers from distant states such as Bihar, Orissa and Himachal Pradesh. For these listeners, music was a mode of keeping in touch with their regional roots. Often carrying audio and video files of commercial music from their home regions on their mobile phones and USB drives, these listeners also shared this music with download vendors contributing to the circulating music. Collections made in such ad-hoc manners, combined with the mode of bulk, non-singularized consumption characteristic of download vending appeared to open new musical possibilities for customers—a kind of vernacular musical cosmopolitanism that reached across languages and genres.

Studies of the use of portable music devices among urban consumers in the developed world (e.g. Bull 2006) have often discussed mobility and individuation as their key affordances. Such studies also link personal stereo devices with individuated listening, the creation of personal auditory experiences in public spaces, and attempts at 'sensory gating' against chaotic urban life. Among music consumers that were part of the research in India, mobility and the control over musical preferences were important, but to a small extent. Largely though, music was perceived as an object of sharing and the activity of listening as a social practice. Even in public spaces (such as public transport buses, markets), music was played on the speakers of portable devices. In conjunction, however, there were also increasing attempts to sanitize public spaces of unwanted sounds through formal regulations. Music was extensively shared by listeners among each other through exchange of individual songs via Bluetooth, of memory cards, as well as of playback devices. Part of the reason of such exchanges was to save money spent on music. In these specific contexts of non-elite consumers, a key affordance of portable digital devices in was their independence from the vagaries of the electric supply. Given the frequency of electric load shedding areas outside of the metropolitan, any device that had a chargeable battery was valuable.

Informal economies and the mainstream music industry

The modes of music consumption described above were tied integrally to informal economies for music circulation, specifically those that had emerged around download vending. Similar to the spatially produced legitimacies of CD, DVD and media piracy (Sundaram 2009, Beaster-Jones forthcoming), spaces for download vending appeared to be arranged along tacit lines of utility and acceptability. In prominent legal electronics markets in New Delhi, it was difficult to locate download vendors among the numerous electronics brand franchises or to have independent stores admit to downloading. On the other hand, in lower middle-class markets, vendors not only acknowledged and advertised their downloading business but were also happy to talk at length about its logistics. In several markets, local phone repair stores that also legally traded in China-made and second-hand phones had absorbed downloading in their repertoire of services.

Vendors were keenly aware of the illegality of downloading; that did not however seem to impact its acceptability as a service. (Stories about the complicity of law enforcement in allowing downloading to flourish were also narrated).

At the time of the research, the mainstream music industry in India was taking a firm stand against grey economic practices, claiming an annual loss of INR 450 crores (~ $ 83 million) due to music piracy. While the ascription to download vending or its estimated size was unspecified, it was widely regarded as both a source of serious financial loss and an expanding market. To address mobile chip piracy—as it was referred to in industry circuits—in 2009 the Indian Music Industry (IMI), the most prominent association of music producers in India representing labels producing 75% of copyrighted musical recordings, began to market a license specifically for download vendors. The MMX—or Mobile Music Exchange—was a blanket license that allowed vendors to legally sell downloads of music and media that were within the copyright of IMI members. The IMI general secretary, Savio D'souza, explained that the immaterial and decentralized replication in mobile chip piracy made it difficult to stop vendors by seizing equipment or shutting stores. Therefore, the approach that the IMI team had chosen was to focus on monetization rather than curbing. The IMI had created the license to offer download vendors an option to frame their businesses as legal, and this had succeeded at the experimental stage, returning a profit of 100% in the first year of their launching in the state of Andhra Pradesh.

To conclude

Our research investigated how globally ubiquitous technologies for music on portable digital devices engendered locally inflected practices of music consumption/ circulation/ economies in parts of north India. The ethnographic contexts, characterized by low Internet access, offline networks that included vendors and migrant workers, limited digital storage as well as rich informal media economies facilitated new modes of music vending, sharing and consumption. The portability of the digital took on new meaning as music traversed circuits of Bluetooth exchanges, offline downloads and sharing of

memory cards. With the flourishing of an informal economy centered on these technologies, exiting logics of traditional industry models were upset and the formal music industry was forced to respond in innovative manners. Portable digital devices have only become more ubiquitous in the past few years, accentuating some practices discussed in this report. On the other hand, with rising Internet usage on mobile phones, the reliance on online sources for acquiring and sharing music has increased to the detriment of informal offline economies.

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