MONEY FROM MUSIC: SURVEY EVIDENCE ON MUSICIANS' REVENUE AND LESSONS ABOUT COPYRIGHT INCENTIVES

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According to the incentive theory of copyright, financial rewards are what the public trades for the production of creative works. To know whether this quid pro quo is working, one needs to know how much the creators are getting from the bargain. Based on an original, nationwide survey of more than 5,000 musicians, this Article addresses one of the key links in the incentive theory's chain of logic. For most musicians, copyright does not provide much of a direct financial reward for what they are producing currently. The survey findings are instead consistent with a winner-take-all or superstar model in which copyright motivates musicians through the promise of large rewards in the future in the rare event of wide popularity.

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INTRODUCTION

Digitization and Internet distribution began to disrupt the music industry more than a decade ago.[1] The movie, book publishing, and newspaper industries

1. *See, e.g.*, WILLIAM W. FISHER III, PROMISES TO KEEP: TECHNOLOGY, LAW, AND THE FUTURE OF ENTERTAINMENT 4–6 (2004) (summarizing the challenges that the music industry has faced from technological change for more than a decade).

are now facing similar challenges.[2] A polarized debate about copyright law has resulted from this environment of uncertainty about the future of the creative industries. Some argue that we must strengthen copyright protection by increasing its scope and improving its enforcement.[3] Others argue that strengthening copyright would be counterproductive because it would inconvenience consumers and lead infringers to develop more sophisticated ways to avoid enforcement.[4] One of the fundamental issues is whether copyright protection provides necessary and appropriate financial incentives for the creation and dissemination of creative works to the public.[5] By granting exclusive rights to authors of creative works, Congress permits authors—or the intermediaries to whom they may transfer their copyrights—to exert some degree of control over the market for their works against would-be copyists.[6] That control may allow the copyright owner to earn a profit, which motivates the production of creative works in the first place.[7] This set of claims is known as the "incentive theory" of copyright.

As a step toward a better understanding of the incentive theory, this Article focuses on the music industry as a case study in how copyright incentives operate in a particular institutional setting.[8] During the fall of 2011, my colleagues and I conducted an Internet survey of more than 5,000 musicians in the United States.[9] We asked our respondents questions about the sources of their revenue

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2. *See generally* ROBERT LEVINE, FREE RIDE: HOW DIGITAL PARASITES ARE DESTROYING THE CULTURE BUSINESS, AND HOW THE CULTURE BUSINESS CAN FIGHT BACK (2011) (describing the extant harms and coming threats to the music, movie, book publishing, and newspaper industries).

3. *See, e.g.*, Scott Turow et al., Op-Ed., *Would the Bard Have Survived the Web?*, N.Y. TIMES, Feb. 15, 2011, at A29 (advocating enhanced copyright enforcement by arguing that the dramatists of Shakespeare's age flourished because they could monetize their work).

4. *See, e.g.*, Cory Doctorow, *Copyright Enforcers Should Learn Lessons from the War on Spam*, GUARDIAN (Jul. 15, 2008, 7:51 AM), http://www.guardian.co.uk/technology/2008/jul/15/copyright.filesharing.

5. *See* KAL RAUSTIALA & CHRISTOPHER SPRIGMAN, THE KNOCKOFF ECONOMY: HOW IMITATION SPARKS INNOVATION 3–7 (2012) (discussing the empirical question of whether copyright incentives matter for innovation).

6. For a discussion of one way to characterize the incentive theory of copyright, which covers many of the important economic forces at work and offers both an informal and formal presentation, see WILLIAM M. LANDES & RICHARD A. POSNER, THE ECONOMIC STRUCTURE OF INTELLECTUAL PROPERTY LAW 37–84 (2003).

7. "[Intellectual property] rights give the innovator the power to exclude or inhibit direct competition, which yields potential power over price. If demand is sufficient, the innovator can use that power to earn a positive return on investments in innovation." Michael W. Carroll, *One for All: The Problem of Uniformity Cost in Intellectual Property Law*, 55 AM. U. L. REV. 845, 851 (2006).

8. COMPUTER SCI. & TELECOMMS. TELECOMMS. BD., THE DIGITAL DILEMMA: INTELLECTUAL PROPERTY IN THE INFORMATION AGE 76 (2000) (describing the music industry in a chapter titled "Intellectual Property's Canary in the Digital Coal Mine").

9. By "musician," we mean to refer to singers, instrumentalists, songwriters and composers, recording artists, live performers, and teachers of all types and in all genres, whether full-time or part-time.

from music. Within the music industry, one piece of information necessary to analyze incentive theory is how much money musicians receive from creating copyrighted works.[10] According to the incentive theory, these financial rewards are what the public trades for the production of creative works. To know whether this quid pro quo is working, one needs to know how much the musicians are getting from the bargain. Thus, our survey data address one of the key links in the incentive theory's chain of logic.[11]

Our survey data can enrich the incentive theory by demonstrating the many types of music-related work—recording, composing, performing, teaching, and so on—and the variety of working situations for musicians from full time to part time.[12] A number of distinct activities relate to making music or being a working musician: composing, recording, performing live, doing session work,[13] merchandising, teaching, administering, managing, and promoting, just to name a few. I will refer to these as the "roles" that musicians play.[14] Each role corresponds to a category of revenue: composition revenue, recording revenue, and so on.

According to my classification of the eight revenue categories, the survey data show that, in aggregate, the musicians in our sample earned 12% of revenue from sources directly related to copyright, 10% from sources with a mixed

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10. I discuss other necessary pieces of information for testing the validity of the incentive theory, many of which are beyond the scope of our survey, below. *See infra* Part I.

11. Relatively few empirical studies have tested the incentive theory or the assumptions behind it. *See* Diane Leenheer Zimmerman, *Copyrights as Incentives: Did We Just Imagine That?*, 12 THEORETICAL INQUIRIES L. 29, 32 (2011) ("[T]here has been relatively little critical evaluation of the empirical legitimacy of the theoretical assumptions about copyright as an incentive."); *see also* JAMES BOYLE, THE PUBLIC DOMAIN: ENCLOSING THE COMMONS OF THE MIND 205–07 (2008) (referring to intellectual property policy as "an evidence-free zone"); David McGowan, *Copyright Nonconsequentialism*, 69 MO. L. REV. 1, 2 (2004) (stating that scholarly debate about copyright law "often consists of competing narratives that use hunches and conjectures").

12. I discuss previous research on the U.S. music industry below in Part II.F. Prior work by European economists has used secondary sources and some interviews to glean information about what composers earn through collection societies. *See, e.g.*, Martin Kretschmer, *Artists' Earnings and Copyright: A Review of British and German Music Industry Data in the Context of Digital Technologies*, 10 FIRST MONDAY (Jan. 3, 2005), http://www.firstmonday.org/htbin/cgiwrap/bin/ojs/index.php/fm/article/view/1200/1120 (reviewing data on the concentration of composers' performance royalties in the U.K. and Germany); Ruth Towse, *Copyright and Economic Incentives: An Application to Performers' Rights in the Music Industry*, 52 KYKLOS 369 (1999) (reviewing analogous data for the U.K., Sweden, and Denmark).

13. "Session work" refers to the situation in which a featured recording artist hires other musicians at an hourly rate, sometimes under a union contract, to perform either at a live performance or on a recording to which the featured artist or her record label will own the copyright.

14. By making this usage explicit, I hope to avoid confusion with the notion of dramatic roles, notwithstanding the 3% of respondents who reported earning some revenue from acting. *See infra* app. D.

relationship[15] to copyright, and 78% from sources indirectly related or unrelated to copyright. These aggregate numbers suggest that many musicians earn little money from activities directly subject to copyright protection. But this reflects an average across all respondents. Musicians' mix of revenue sources varies substantially by income bracket and musical genre. If one looks at the subgroup of composers in the top income bracket, 68% of their revenue is directly related to copyright, 17% has a mixed relationship, and 15% is indirectly related or unrelated. Thus, some subgroups of musicians earn a sizeable portion of their revenue directly from copyright-protected works. This can help guide policymakers to understand more specifically the population of creators they affect directly and the broader population they may affect indirectly.

The survey findings add a great deal to our understanding of copyright incentives. The population of musicians is diverse and specialized, and the population of survey respondents reflects that. By knowing more about the musicians to whom copyright offers financial rewards—their demographic traits, their labor-market situations, the roles they play, and the specific ways they earn revenue—policymakers can work toward an evidence-based copyright policy.

The Article is organized as follows. Part I explains the motivation for the survey by discussing the incentive theory in more detail and reviewing previous empirical work on musicians. Part II describes the survey methods and addresses various issues relating to Internet surveys. Part III reports the survey results, with a particular focus on our findings about the relative importance of various revenue sources. Part IV discusses the implications of the survey findings for copyright law and policy. I conclude by arguing that the survey evidence is most consistent with a particular version of the incentive theory.

I. THEORY

The first Section of this Part explains the policy concerns that motivated the survey of musicians about their revenue sources. The next Section explains that this survey represents only a first step toward understanding the incentive theory. Finally, this Part discusses previous research on how musicians earn money and how the survey was designed to address the gaps in our previous knowledge about musicians' revenue.

A. The Incentive Theory

The incentive theory of copyright aims to provide incentives to two kinds of actors in the economy: creators and intermediaries. The following is a basic outline of how the incentive theory works: Copyright law grants certain exclusive rights to creators of original works that are fixed in a tangible medium of expression.[16] In the music industry, this means both compositions and sound

15. I categorize session work as having a mixed relationship to copyright because some session work is for recordings but some is for live performances.

16. *See* 17 U.S.C. §§ 102, 106 (2012).

recordings, which are separate types of copyrightable subject matter.[17] Creators may release their own works to the public. But Congress has designed the copyright system with the expectation that many creators will contract with intermediaries to distribute their works commercially.[18]

Intermediaries potentially offer capital investment, marketing, promotion, and wider distribution, which together can generate larger financial rewards than the creator could collect on his or her own. In return, the creator must transfer either copyright ownership or a large royalty share to the intermediary; for example, in the music industry, recording artists typically transfer their sound recording copyrights to record labels in return for royalties.[19] Composers and songwriters typically sell or license their composition copyrights to publishing companies, which will administer the copyright in return for 25–50% of the proceeds.[20] Thus, intermediaries often own the copyrights and receive a medium to large share of the proceeds from exploiting the works.[21] The creators receive royalties, and the listening public benefits from the works that reach them.

With that background, it is easier to see why surveying musicians about how they make money would provide useful information about how copyright law functions. The incentive theory assumes a chain of value, as outlined above, from creator to distributor to the listening public. It also assumes money flowing in the opposite direction, from the listening public to distributors to creators, in order to complete the exchange. Without knowing how much money reaches musicians, there is no way to assess whether particular changes to copyright law would encourage more creative activity and, if so, how much more.

One specific version of the incentive theory is the marginal-reward approach. In this version, copyright creates the conditions that allow musicians to receive a contemporaneous financial reward for each copyrightable piece of music they compose or record. To the extent that rewards are uncertain, the marginal-reward theory assumes that musicians perceive the average financial reward across all musicians and are motivated by the prospect of that expected return. An alternative, competing version of the incentive theory is the lottery approach.[22] Under this version of the incentive theory, rather than the average amount of financial rewards, musicians are enticed to create by the prospect of a very large

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17. *See id.* § 102(a). Compositions are known as "musical works" in the Copyright Code. *Id.*

18. Jessica Litman, *Real Copyright Reform*, 96 IOWA L. REV. 1, 10–12 (2010) (explaining how copyright law contemplates that creators will transfer their copyrights to intermediary distributors).

19. *See* KEMBREW MCLEOD & PETER DICOLA, CREATIVE LICENSE: THE LAW AND CULTURE OF DIGITAL SAMPLING 76, 79–82 (2011) (summarizing the role of record labels in the music industry and their contractual relationship with recording artists).

20. *Id.* at 76, 82–84 (summarizing the role of publishers in the music industry and their contractual relationship with songwriters and composers).

21. *See* Litman, *supra* note 18, at 18–19 (discussing the role of intermediary distributors in copyright industries generally).

22. *See* Zimmerman, *supra* note 11, at 41–42 (mentioning the lottery theory as an alternative economic model for copyright incentives).

financial reward that occurs with a very small probability.[23] The music industry is often described as a superstar, or winner-take-all, market.[24] If the labor market for musicians has this structure, then inefficiencies can result as too many musicians aim for huge payoffs.[25] Winner-take-all markets also contribute to income and wealth inequality, raising concerns about fairness.[26] The survey data can be analyzed to demonstrate whether large rewards are concentrated among a few musicians in our sample.

B. Musicians' Revenue Data as a First Step

Because the survey data are not experimental, and involve only a cross-sectional snapshot of one time period, they do not lend themselves to making causal inferences. But the survey findings can rule out certain conclusions or disprove certain theories where the data are simply not consistent with the theory. The findings can also suggest which theories seem the most promising, where the data are consistent with those theories.

Ideally, to achieve a fuller economic picture of the copyright system, the survey findings on musicians' revenue sources would be joined with data regarding other aspects of the system. For example, one could attempt to measure the other side of the exchange with creators to determine how many creative works, and of what quality, are being produced.[27] One must also understand how the financial rewards and the creative output are connected in terms of psychological motivation.[28] Moreover, to fully understand copyright incentives, one must measure the financial rewards the intermediaries receive, the services they offer in terms of developing and disseminating works to the public, and actions they take that affect the public's access to creative works.[29]

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23. *Id*. The lottery model assumes that musicians are risk-loving rather than risk-averse in terms of their choice of career.

24. *E.g.*, Sherwin Rosen, *The Economics of Superstars*, 71 AM. ECON. REV. 845 (1981) (analyzing a formal economic model of the phenomenon in which top performers in a job receive outsized rewards).

25. *See* ROBERT H. FRANK & PHILIP J. COOK, THE WINNER-TAKE-ALL SOCIETY: HOW MORE AND MORE AMERICANS COMPETE FOR EVER FEWER AND BIGGER PRIZES, ENCOURAGING ECONOMIC WASTE, INCOME INEQUALITY, AND AN IMPOVERISHED CULTURAL LIFE 45, 110 (1995) (using the music industry as an example of the author's theory of winner-take-all markets, which the authors view as inefficient).

26. *Id.* at 5–7.

27. *See* JOEL WALDFOGEL, COPYRIGHT PROTECTION, TECHNOLOGICAL CHANGE, AND THE QUALITY OF NEW PRODUCTS: EVIDENCE FROM RECORDED MUSIC SINCE NAPSTER (Nat'l Bureau of Econ. Research, Working Paper No. 17503, 2011), *available at* http://www.nber.org/papers/w17503 (using music critics' annual best-of lists to measure the quality of music over time).

28. *See* Christopher Buccafusco & Christopher Sprigman, *Valuing Intellectual Property: An Experiment*, 96 CORNELL L. REV. 1 (2010) (reporting the results of an experiment testing creators' versus non-creators' behavior in the context of transactions).

29. *Cf.* Brett Danaher et al., *The Effect of Graduated Response Anti-Piracy Laws on Music Sales: Evidence from an Event Study in France*, J. INDUS. ECON. (forthcoming 2013), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1989240.

With that context in mind, I think of the incentive theory as raising four major empirical questions, although other questions and formulations are certainly possible:

1. How does musicians' creative output respond to financial incentives?
2. Do musicians receive greater rewards on the margin when copyright law is strengthened, or are musicians instead seeking the disproportionate rewards of superstars that copyright law protects?
3. Will music-industry intermediaries respond to financial incentives by altering their investment, production, distribution, and promotional activities?
4. What is the relationship between intermediaries' financial rewards and musicians' financial rewards?

The Money from Music Survey provides information that is necessary, though not sufficient, to answer three questions. To answer Question 1, one must understand the amount of money being distributed to musicians. And to learn whether copyright is providing financial incentives, one must know how much of musicians' revenue is related to copyright. To answer Question 2, one must understand the distribution of music-related income. If only musicians at the top of the income hierarchy are earning an economically important proportion of their revenue from sources directly related to copyright, then the data would be consistent with the superstar or winner-take-all theory and inconsistent with a theory based on copyright having a marginal effect on all musicians.

The survey cannot really address Question 3, because the respondents are musicians rather than labels, publishers, or other intermediaries. But it can address issues related to Question 4, such as whether record labels are increasing or decreasing their support for recording artists in response to digitization. Again, the survey data are only a first step toward answering any of these questions. But in what has been a largely evidence-free field of policy, the findings reported in this Article represent progress.

Critiques of the incentive theory abound.[30] The incentive theory tends to sidestep thorny issues about whether creativity or "the Progress of Science,"[31] can be measured quantitatively. Even assuming that quantification is possible, what quantity should be optimized: the number of works; the economic value of works, measured by consumer demand; or something else? Usually the incentive theory focuses on wealth-maximization by default, but such an assumption requires a

30. *See, e.g.*, Dan L. Burk, *Law and Economics of Intellectual Property: In Search of First Principles*, 8 ANN. REV. L. & SOC. SCI. 397 (2012) (arguing that different incentive theories may apply in different industries); Amy Kapczynski, *The Cost of Price: Why and How to Get Beyond Intellectual Property Internalism*, 59 UCLA L. REV. 970 (2012) (arguing for consideration of values beyond efficiency in intellectual property law); Rebecca Tushnet, *Economies of Desire: Fair Use and Marketplace Assumptions*, 51 WM. & MARY L. REV. 513 (2009) (arguing that psychology and sociology provide better explanations of creative activity than economics).

31. U.S. CONST. art. I, § 8, cl. 8.

reasoned defense.[32] These philosophical issues are outside the scope of this Article. Even skeptics of the incentive theory, however, have reason to be interested in empirical studies of creators.[33]

This Article also leaves aside the debate over the normative desirability of the incentive theory of copyright. Many commentators have offered alternative accounts of the justification for copyright law.[34] Musicians may care as much or more about exerting control over their works than reaping financial rewards. They may use copyright protection to require attribution when their works are used[35] or to protect the integrity of their works.[36] By focusing on the incentive theory and financial rewards, I do not mean to disparage these other theories. On the contrary, my goal is to use empirical evidence to scrutinize the incentive theory. Should weaknesses of the incentive theory emerge from this line of research, this would enhance the importance of other theories.

C. Why Revenue Streams?

Studying the music industry means studying a complicated set of intermediaries: record labels, music publishers, collective rights organizations, and so on. More to the point, without access to detailed contractual information and private royalty formulas, one cannot determine directly the extent to which revenue from music flows through intermediaries to the musicians.[37] Thus, to study how financial incentives matter for musical creation, it makes sense to ask the creators.

My colleagues and I decided to survey musicians about how they earn revenue. In particular, we wanted to ask them in a specific way about different revenue sources, or what we will often call "revenue streams," in reference to the idea that revenue flows from place to place. The stream metaphor also evokes the notion of branching tributaries, which fits the complex way in which intermediaries of the music industry collect fractions of revenue from sales of compact discs, vinyl, and digital downloads; airplay on traditional and Internet radio; new "music streaming" services that offer listeners the opportunity to hear songs on demand; live performances of many kinds; merchandise, such as T-shirts; and other sources.

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32. *See* Tushnet, *supra* note 30, at 515.

33. *Id.* at 516 ("Incentives do matter . . . and even if they didn't, the availability of rewards, some of which are generated by copyright, would still affect the extent to which some creators could afford to satisfy their preferences to create.").

34. *See, e.g.*, ROBERTA ROSENTHAL KWALL, THE SOUL OF CREATIVITY: FORGING A MORAL RIGHTS LAW FOR THE UNITED STATES (2009).

35. *See, e.g.*, Ashley West, Comment, *Little Victories: Promoting Artistic Progress Through the Enforcement of Creative Commons Attribution and Share-Alike Licenses*, 36 FLA. ST. U. L. REV. 903, 924 (2009) (discussing the desirability for musicians of requiring attribution through a Creative Commons license).

36. *See* MCLEOD & DICOLA, *supra* note 19, at 118–21.

37. *See generally* DONALD S. PASSMAN, ALL YOU NEED TO KNOW ABOUT THE MUSIC BUSINESS 84–118, 132–84 (7th ed. 2009) (cataloging dozens of deal points in contemporary recording contracts and explaining detailed royalty calculations).

Ideally, we could go back in time to 1995 (a few years before widespread file-sharing) or 1990 (a few years before the commercial Internet) in order to collect musicians' revenue data as a benchmark.[38] Moreover, collecting data before key legislative changes, such as the Digital Millennium Copyright Act ("DMCA"),[39] would have allowed researchers to study the effect of those policies. Unfortunately, we cannot describe the state of musicians' revenue before and after developments such as the Napster litigation[40] or the iPod/iTunes store combination.[41] Previous studies of musicians focus on a single musical genre, the membership of a single music organization, or both.[42] Other studies look at the performing arts as a whole.[43] While valuable, such studies have not focused on questions of copyright policy for the music industry, which requires a survey of the full population of musicians.

II. SURVEY METHODS

The Money from Music Survey is part of the larger Artist Revenue Streams Project. The project includes three main parts: (1) qualitative interviews with dozens of musicians about the ways they generate revenue from music; (2) even more detailed case studies in which several musicians allowed a member of our team to have access to their financial and accounting records from recent years; and (3) this Internet-based survey.[44] Future of Music Coalition ("FMC"), which is a nonprofit education, research, and advocacy organization based in Washington, D.C., coordinated the Artist Revenue Streams Project.

More than 6,700 eligible musicians took at least part of the survey in September and October of 2011. A total of 5,371 musicians completed the key question about revenue sources. A total of 5,013 respondents gave us enough

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38. The National Endowment for the Arts ("NEA") occasionally conducts economic studies of artists' labor-market outcomes at a high level, including those of musicians. For the most recent report, see NAT'L ENDOWMENT FOR THE ARTS, ARTISTS IN THE WORKFORCE 1990–2005 (2008), *available at* http://www.nea.gov/research/ArtistsInWorkforce.pdf. But these studies, while useful, do not categorize revenue sources or discuss the contours of copyright law in any way.

39. Pub. L. No. 105-304, 112 Stat. 2860, 2887 (1998) (codified at 17 U.S.C. §§ 101, 108, 109, 112, 114, 512, 1201–1205 (2012)).

40. A&M Records, Inc. v. Napster, Inc., 239 F.3d 1004 (9th Cir. 2001).

41. *See* STEVE KNOPPER, APPETITE FOR SELF-DESTRUCTION: THE SPECTACULAR CRASH OF THE RECORD INDUSTRY IN THE DIGITAL AGE 157–81 (2009).

42. *See, e.g.*, JOAN JEFFRI, CHANGING THE BEAT: A STUDY OF THE WORKLIFE OF JAZZ MUSICIANS (2003), *available at* http://www.nea.gov/research/JazzExecSummary.pdf, http://www.nea.gov/research/JazzII.pdf, http://www.nea.gov/research/JazzIII.pdf (reporting results of a survey of jazz musicians in the American Federation of Musicians and a separate survey of non-union jazz musicians).

43. *See, e.g.*, KEVIN F. MCCARTHY ET AL., THE PERFORMING ARTS IN A NEW ERA (2010), http://www.rand.org/pubs/monograph_reports/MR1367.html (RAND Corporation study describing the plight of mid-sized non-profit performance organizations).

44. For more information about the full project, please see ARTIST REVENUE STREAMS, FUTURE OF MUSIC COALITION, http://money.futureofmusic.org (last visited Mar. 5, 2013).

information to estimate their income from music-related sources, and 4,652 musicians made it through every single question in the survey. Thus, depending on the question, we will report responses based on a total population of somewhere between 4,652 and 5,371 musicians. We allowed individuals to self-identify as musicians so long as they earned or have in the past earned money from music. We surveyed a diverse geographic population, with respondents in every state and good dispersion across regions. We also have musicians from a wide variety of musical genres. With that overview as an introduction, this Part describes our survey methods in more detail.

A. Hypotheses Tested

The research team developed a set of hypotheses that we tested with the survey.[45] First, we expected to find that each musician relies on multiple revenue streams. As a corollary to this, we expected that musicians' revenue sources would vary by genre. For instance, we had good information that classical musicians make money in very different ways from other musicians, especially those in rock and pop.[46] For instance, many classical musicians are salaried employees of orchestras, despite an increasingly difficult job market.[47] We expected it to be less common for rock musicians to work as salaried employees.

Second, we expected that musicians' roles within the industry would have a large effect on which revenue stream mattered most to them. To take an almost obvious example, we anticipated that musicians who concentrate on the role of live performer would rely most heavily on live performance revenue.

Third, we expected to find that songwriters and composers are seeing diminished revenue from their copyrighted compositions. This prediction derives partly from what we learned from personal interviews. It also reflects our suspicion that declining revenue—whether caused by unauthorized downloads or other trends—is a fact that lies behind the strident support for stronger copyright protection among many organizations on the publishing side of the music industry.[48]

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45. The research team shared these hypotheses publicly, in forums like the Future of Music Coalition Policy Summit, before and during the survey period.

46. *Compare* ELLEN HIGHSTEIN, MAKING MUSIC IN LOOKING GLASS LAND: A GUIDE TO SURVIVAL AND BUSINESS SKILLS FOR THE CLASSICAL PERFORMER (3d ed. 1997), *with* PETER SPELLMAN, THE SELF-PROMOTING MUSICIAN: STRATEGIES FOR INDEPENDENT MUSIC SUCCESS (2d ed. 2008).

47. *See, e.g.*, Kristin Tillotson, *Playing for a Living*, MINN. STAR TRIB., Nov. 10, 2012, at 1E.

48. *See Spring 2010 Washington Update*, NAT'L MUSIC PUBLISHERS ASS'N, http://www.nmpa.org/legal/washington.asp?id=7 (last visited Feb. 26, 2012) ("However, global online theft of music is a devastating problem that affects all songwriters and publishers, whether by loss of direct sales of songs or lost opportunity for cultivating new talent.").

Finally, based on prior survey work,[49] we expected that musicians' opinions about the Internet—and their view of unauthorized downloading in particular—would reveal a large group with a neutral or indifferent opinion. We predicted that some musicians would agree with the record labels, publishers, performing rights organizations, unions, and trade associations that the Internet has caused disruption, misery, and less revenue than before. Another faction of musicians view unauthorized downloading positively as a way to reach more listeners. In between those extremes, an even larger group of musicians sees both sides, or does not find the question applicable.[50]

B. Developing Language for Survey Questions

From January through August of 2011, we used information the research team was learning from the qualitative interviews and the detailed financial case studies to help us develop and revise the Internet survey questions over the course of several months. We started with a list of the ways that revenue flows to musicians as a direct or indirect result of musical work—what we ended up calling "artists' revenue streams."[51] Based on the qualitative interviews we added items to that list, split some items into two distinct streams where appropriate, and refined our formulations of other items. We ended up with approximately 40 distinct revenue streams that we wanted to survey musicians about.[52]

An extremely important task at this stage of the research was to choose vocabulary that musicians would easily comprehend and recognize as the jargon of their industry. Just as many specialized terms exist for the composition and performance of music—riffs, jams, breaks, bridges, fills, and so on—many specialized terms exist for the business of music. One example is "session work," referring to the situation in which a featured recording artist hires other musicians at an hourly rate to perform either at a live performance or on a recording to which the featured artist or her record label will own the copyright. Some music business terms can be obscure. Consider the term "mechanicals," short for "mechanical royalties," which are payments to the owners of composition copyrights when copies of recordings of their compositions are reproduced and distributed.[53] It has

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49. MARY MADDEN, ARTISTS, MUSICIANS, AND THE INTERNET 12–14 (2004), http://www.pewinternet.org/~/media//Files/Reports/2004/PIP_Artists.Musicians_Report.pdf.pdf.

50. The research team recorded one more testable hypothesis that is not relevant to this paper: that geographic location does not matter as much as it used to for musicians' revenue.

51. In this usage, the term "artist" is interchangeable with "musician," but for clarity I will primarily use the latter. This allows me to distinguish a subgroup of musicians who engage in the task of recording and refer to them as "recording artists."

52. The project website includes definitions of each stream in our original list of 40 distinct revenue streams (the count is up to 42 as of this writing). *See 42 Revenue Streams*, FUTURE OF MUSIC COALITION, http://money.futureofmusic.org/40-revenue-streams/ (last visited Feb. 26, 2012).

53. The fundamental distinction in the law of music copyright is between two kinds of copyrightable subject matter: compositions (which the Copyright Code calls

been a long time since recorded music players would be described as mechanical, but composers still refer to that revenue stream as their mechanicals.

We also took into account diversity of musicians' genre. We aimed to create a national survey of musicians in any genre and in any role. But the ways of making money—and talking about making money—differ by genre and role. A classical musician might play in an orchestra and receive a salary, while a folk musician might make a majority of her money as a guitar instructor. A single musician might be a composer, recording artist, live performer, producer, session musician, orchestra member, and teacher. But each musician will mix and match those different roles, or a subset of them, in different contexts. In these ways, musicians are a highly diverse group. We wrote flexible questions that would accommodate a wide array of musicians and signal, through vocabulary, our understanding of the differences among them. For example, we knew that some composers do not identify as "musicians"—they tend to understand the term to mean people who play instruments for a living, working as live performers and recording artists. Thus, we wrote questions that referred to "musicians and composers" throughout the survey.[54]

C. Internet Survey Methods

The survey was open to the public from September 6, 2011, through October 28, 2011. We used the Internet survey service SurveyMonkey to conduct the survey. The SurveyMonkey software afforded us flexibility. For instance, the software allowed us to insert pop-up definitions of terms that some respondents might find overly technical. SurveyMonkey was also less expensive than many alternative survey-software platforms. Finally, FMC had experience using SurveyMonkey for a survey about musicians and health insurance.

We designed three versions of the survey: short, medium, and long. All three versions start with the same 18 questions; we will refer to these as the "core questions." The core questions covered some demographic information to demonstrate eligibility for the survey: having U.S. citizenship and being at least 18

"musical works") and sound recordings. *See* 17 U.S.C. § 102(a) (2012). Composition copyrights protect the underlying structure of the music—what would be written down in the score or sheet music, for example. *See, e.g.*, Newton v. Diamond, 388 F.3d 1189, 1191–92 (9th Cir. 2003) (treating elements appearing in the score of a piece of music as part of the composition). Sound recording copyrights protect a particular recording, often a recorded performance of a composition but not necessarily so. *See* 17 U.S.C. § 101 (defining "sound recordings") (A field recording of, say, ambient traffic noise may receive a sound recording copyright but does not capture composition.). Many typical uses of music, such as downloading or streaming of music online, implicate both the composition copyrights and the sound recording copyrights of their respective owners. *See, e.g.*, Arista Records, LLC v. Launch Media, Inc., 578 F.3d 148, 152–54 (2d Cir. 2009) (describing the legislative history of Congress's decision to treat music streaming as an infringement of both the composition and the sound recording).

54. The fact that most composers do not understand themselves to fit under the umbrella term "musicians" was surprising. It made writing the questions in a concise and clean way more frustrating, but we made the accommodation.

years old. The core questions also cover basic labor-market outcomes, membership in musical organizations, and revenue sources. We estimated, based on our beta testing, that the core questions would take approximately ten minutes to answer. Then, Question 18 asked the respondents to choose their survey version or path.[55]

We designed the short, medium, and long versions to take an average of 10, 20, or 30 additional minutes to complete, respectively. The long version of the survey asked detailed questions about every role that the respondent reported was relevant to their experience as a working musician: composer (of music, lyrics, or both), recording artist, live performer, session musician, or teacher. We will call these questions the "role questions." The medium version of the survey shortened the respondent's completion time by asking role questions only about the role from which the respondent reported earning the most revenue. Respondents choosing the short version answer only two questions about what roles they play, without any detailed follow-up questions.

All three versions of the survey closed with the same 18 questions that cover a range of topics and ask about additional demographic information. I will refer to these questions as the "closing questions."

We conducted four rounds of beta testing, in which people outside the research team took draft versions of the survey. We sought feedback about ease of understanding, proper use of music-industry vocabulary, and organization of the survey questions. The tests were conducted in June, July, and August of 2011. In total, several dozen individuals served as beta testers, some taking multiple versions of the survey or testing at different times for comparison. We recorded a total of 110 practice run-throughs with the survey.

D. Soliciting Participation

The population of American musicians is heterogeneous and specialized. No single organization owns a mailing list that includes all musicians in all genres. Thus, we developed a strategy for soliciting participation across a range of music organizations: unions, performing rights organizations, genre-based associations, support organizations, and others. We expanded our team during 2011 to build relationships with music organizations and to promote the survey to the general public. We hired a consultant, John Simson, who has worked as an artist manager, Recording Academy board member, and as the founding Executive Director of SoundExchange.[56] We also hired a public relations expert, Charles McEnerney, who developed a marketing plan for the survey that targeted a wide range of media, from news stories to Internet ads to fliers at rock-and-roll shows.

We partnered with more than 100 national music organizations to promote the survey and encourage the organizations' members to take the survey.

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55. Below, in Part II.E, I discuss whether the endogenous survey-path choice introduced biases through differences in attrition rates.

56. SoundExchange is the government's designated collection agency for royalties from non-interactive online streaming services paid to recording artists and sound recording copyright owners. *See* 17 U.S.C. § 114(d)(2).

Our strongest partners included the American Federation of Musicians ("AFM"), as well as several classical- and jazz-focused organizations.

We also offered incentives based on which version of the survey respondents chose. Those taking the long version could enter a raffle to win one of four iPad 2s. One hundred randomly chosen respondents taking the medium version received a gift certificate worth $10 at Amazon.com or Guitar Center. Finally, the first 100 people to take the short version before FMC's annual conference (held during the first week of October 2011) were guaranteed admission to the conference at the musician rate of $25.

E. Completion Rates and Attrition

A total of 7,395 people began the survey.[57] Respondents were allowed to answer for themselves as individuals or from the perspective of their band or ensemble. At the end of the first three questions—which asked for consent,[58] birth year,[59] and citizenship[60]—there remained 6,769 eligible respondents, or 91.5% of those individuals who commenced the survey. From there, respondents continued to drop out at different stages in the survey. Table 1 categorizes the survey questions into groups of questions. This provides an overview of the structure of the survey and the content of questions. The final two columns of Table 1 reports the number of respondents completing the survey through each stage.

Most of the attrition among eligible respondents occurred early, between Questions 4 and 12. From Question 4 through Question 11, 546 respondents stopped answering questions. Another 852 respondents stopped answering at Question 12 alone. The extremely high rate of attrition at that question reflects the relative difficulty of the question, which was central to the survey's goals and will be central to many of the results I report in this Article. Question 12 asked respondents to allocate their revenue among seven sources, as well as a miscellaneous "other" category.

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57. This figure of 7,395 respondents does not include (1) a few dozen obviously automated responses that were easily identifiable as coming from a handful of IP addresses in China and (2) duplicate responses from the same IP address with exactly the same information.

58. All but five respondents consented to take part in the survey as anonymous participants after being informed about the goal, eligibility requirements, necessary preparation, estimated time to complete the survey, navigation procedures, anonymity policy, and how the results would be used.

59. Among those respondents who did consent, 208 did not enter their year of birth. All but one of those 208 did not answer any subsequent questions either; the one respondent continued answering through Question 18 but did not complete the survey. Another 49 respondents were ineligible because they were younger than 18 years old based on the birth year they entered at Question 2.

60. Thirty-two respondents who consented and entered a valid birth year did not answer Question 3 about citizenship. Only one of those 32 answered any subsequent questions; one respondent stopped answering at Question 5. Another 332 respondents were not U.S. citizens, making them ineligible for the study.

If respondents were not prepared with a sufficient amount of their (or their band or ensemble's) personal financial information, they may have dropped out of the survey. Respondents were free, however, to stop the survey and start again later, and completion times ranged into the weeks.

Respondents may also have become concerned that the survey would be too demanding (although Question 12 was probably the most quantitatively taxing question in the survey). Part-time musicians or respondents early in their careers also appeared likely to drop out at this stage.[61] Question 12 was placed near the beginning of the survey based on our many rounds of beta testing. Test respondents provided the feedback that it was easier to handle that question before they became fatigued. As a result, my colleagues and I expected a certain amount of attrition to occur at this point, but were pleased to have more than 5,000 respondents make it over the Question 12 hurdle.

The final row of Table 1 shows that 4,652 respondents completed the survey through the end. Respondents may have skipped or declined to answer some questions along the way. Thus, this 4,652 figure merely denotes the number of respondents who gave a response to the final question of the survey (and most of the questions before that).

Attrition during the survey presents the issue of what counts as a sufficiently complete survey for the purpose of this data analysis. Because the survey is focused on revenue sources, Question 12 is particularly important. In this Article, I will generally treat respondents who completed the survey through Question 12 as sufficiently complete to use the information we have from them. This gives a maximum sample size of 5,371 respondents.[62] Because of attrition subsequent to Question 12, however, and because some respondents skipped or declined to answer particular questions, the number of data points for individual questions will often be less than 5,371. In particular, any analysis based on estimated income from music-related sources will have a sample size of 5,013, because a few hundred respondents declined to provide information about their income.

I have analyzed the dropout rates among the three different versions of the survey. One concern was that respondents who chose the short version of the survey would be more likely to drop out during the closing questions. Moreover, those taking the short version were not offered incentives and therefore likely had less motivation to finish the survey in its entirety. As it happened, 5.5% of those respondents taking the short version of the survey stopped answering during the

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61. The mean hours worked by those respondents dropping out at Question 12 was 25.8 hours per week, compared to 29.3 hours per week for those in the main sample (that is, those who completed the survey through at least Question 12). The average age of those dropping out of the survey at Question 12 was 39.7 years old, compared to a mean age of 45.2 years old for those in the main sample.

62. Of these, 83% answered as individuals and 17% answered as members of a band or ensemble.

closing questions.[63] This compares with 2.9% of those taking the medium version and 1.0% of those taking the long version. This selection effect, in which relatively impatient people opted disproportionately for the short survey, could affect analyses based on the role questions and the closing questions. Impatience might correlate with various labor-market outcomes for musicians. Selection bias of this sort should not affect analyses of the core questions.

F. Representativeness

Because the survey was Internet-based and open to the public, the respondents are not a random sample of the population of musicians. However, one can observe three factors to check the representativeness of our survey sample.

First, one can look at response rates by partner organizations. Table 2 reports the approximate membership of several music organizations, many of which partnered with us to promote the survey; the number of respondents that reported being a member of each organization; and the calculated response rate for each music organization. Some of the organizations, especially the larger ones, include both individuals and organizations (such as publishers and arts presenters) within their reported membership rolls. Thus, the response rates I have calculated are only a rough estimate.

The estimated response rates are nonetheless informative about the sample. For instance, the AFM—the largest musicians' union—participated at a much higher rate than other organizations, 2.9%. This makes sense based on the AFM's relatively eager cooperation with the research team. The response rate from the National Academy of Recording Arts and Sciences ("NARAS")—the organization behind the Grammy awards—was also high, at 2.3%. Other organizations with participation rates above 2% include Chamber Music America, Early Music America, Folk Alliance, American Music Center, Jazz Education Network, American Composers Forum, and the Association of Performing Arts Presenters.

Based on the organizations whose membership participated at the highest rates, the sample is likely to have overrepresentation from the classical and jazz genres. This is reinforced by the relatively high concentration of classical and jazz musicians within AFM.[64] On the other hand, our sample does have substantial representation from other genres. Across the entire sample, 48% of respondents listed genres other than classical and jazz as primary. But it is important to keep the classical and jazz focus in mind when interpreting the aggregate statistics reported in this Article.

As a second type of check for representativeness, one can compare some of our aggregate statistics to those from government surveys of the labor market.

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63. An additional 5.2% declined to provide their ZIP code, which was the final question of the survey. Those taking both the medium and the long version declined to provide their ZIP code (conditional on reaching that final question) at a rate of 1.6%.

64. In our sample, 53.6% of AFM members reported classical as their primary genre, along with 17.7% reporting jazz.

The Occupational Employment Statistics, produced by the Bureau of Labor Statistics, report the hourly wage distribution for the category "Musicians and Singers."[65] The government's figures only pertain to musicians who are employees; self-employed workers are not part of the analysis.[66] The government estimate of the mean wage for musicians is $31.74 per hour, with a median of $22.99.[67]

The survey asked respondents for the number of hours spent on music per week, total income, and percentage of income derived from music.[68] From those three questions, I have calculated an estimate of hourly wages. Among the subset of respondents in the sample who collect some part of their income as salaried musicians (usually as orchestra players), the estimated mean wage is $28.91 per hour, with a median of $20.07. The proximity of the survey estimate to that of the Bureau of Labor Statistics provides some confidence in the representativeness of the sample.

Third, one can compare our results within particular genres or roles to the results of previous studies conducted within those genres or roles. The scholar who has done perhaps the most similar in spirit to our own study is Joan Jeffri of the Research Center for Arts and Culture. Her 2009 study of composers collected some of the same variables we have collected.[69] The 1,347 individuals in Jeffri's sample appear to play instruments and engage in live performances in addition to composing.[70] Similarly, the 2,660 respondents to our survey who report doing at least some composing play many other roles as well, such as recording, performing live, doing session work, teaching, or orchestra playing. An exact apples-to-apples comparison is not possible, but some questions in each study sought the same information.

The composers in our sample look similar to those in Jeffri's sample for variables including income distribution, percentage of income from recordings, percentage of income from songwriting royalties, age, gender, race, and ethnicity, and hours spent on music per week.[71] The participants in Jeffri's survey also reported a mix of attitudes about unauthorized downloading, which accords with

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65. *Occupational Employment Statistics: Musicians and Singers*, BUREAU LABOR STATS. (2011), http://www.bls.gov/oes/current/oes272042.htm (last visited Jan. 28, 2012).

66. *Id.*

67. *Id.*

68. The specific questions are Question 5, Question 16, and Question 17, respectively. We instructed respondents to answer the income questions as individuals (for example, "What's your personal annual income?"), even if they chose to answer other questions from the perspective of their band or ensemble.

69. JOAN JEFFRI ET AL., TAKING NOTE: A STUDY OF COMPOSERS AND NEW MUSIC ACTIVITY IN THE UNITED STATES (2009), *available at* http://artsandcultureresearch.org/images/rcacimages/taking%20note.pdf.

70. *Id.* at 2–3 (showing that live performances account for 15% of professional composers' income and 24% of nonprofessional composers' income).

71. *See id.* at 2 (demographics); *id.* at 23–27 (all other variables).

our results discussed below.[72] The main differences between the statistics collected in the two studies are that the composers in Jeffri's sample are more focused on the classical and new music genres and accordingly receive more revenue from commissions and grants.[73] Overall, a comparison between the two studies suggests that the studies' findings are largely similar where the questions asked overlap. Previous studies do not provide points of comparison for the survey questions that focused on specialized revenue streams, copyright law, or other detailed institutional features of the music industry. But where points of comparison do exist, the results generally support the validity of our survey estimates.

III. SURVEY RESULTS

This Part will begin with a Section describing some basic demographics (including genre) and labor market statistics for the musicians in our sample. The following Section reports which sources account for greater and lesser shares of musicians' revenue from music, starting with aggregate statistics and then providing several different breakdowns of the data into subgroups. The next Section reports some of the survey findings from the role questions, and these questions provide a view into very specific revenue streams and musicians' perceptions of trends in those revenue streams. I then discuss the prevalence of various types of intermediaries, such as record labels and publishers. I conclude this Part with a look at musicians' perceptions of digital and Internet technology, and its effect on their careers.

A. Aggregate Summary Statistics

1. Basic Demographics

The respondents to the survey come from a wide range of age groups. Table 3 includes the age distribution of our sample. The age range with the greatest representation was musicians aged 50–59, which means the sample skewed a little higher in age than the general U.S. population.[74] The sample had fewer individuals aged 18–29 than one would expect based on the general population. But college-aged students are likely to be at or before the beginning of their careers. In our studies of attrition during the survey, those who stopped answering questions tended to be younger than those who continued with the survey at each point. We suspect that this reflects the focus of the survey on revenue and the reasonably detailed knowledge required to answer the revenue questions.

Survey respondents were disproportionately male; as Table 3 reports, men made up about 70% of the sample. The variable that appears to correlate most strongly with gender is musical genre. Within the classical genre, a slight majority

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72. *See id.* at 14–15.

73. *Id.* at 17, 23.

74. This observation is based on information from the U.S. CENSUS BUREAU, STATISTICAL ABSTRACT OF THE UNITED STATES: POPULATION 11 tbl.7 (2012), *available at* http://www.census.gov/prod/2011pubs/12statab/pop.pdf.

of respondents were women. Thus, the gender gap is a feature of the non-classical genres, such as rock (87% male), jazz (87% male), country (84% male), and rap/hip-hop (97% male in a very small sample). Based on recent experience with these genres—for instance, observations of the gender makeup of summer rock festivals[75]—these percentages do not seem out of line with the (unfortunate) reality of the music industry.

The racial and ethnic makeup of the sample, however, is almost certainly more predominantly white than the actual population of musicians in the United States. Table 3 shows that about 88% of respondents were white, compared with only 3.3% African-American, 2.2% Hispanic, and 2.1% Asian. These figures obviously deviate from the percentages for the overall U.S. population.[76] My colleagues and I have sought to address this gap by choosing a more diverse sample for the qualitative interviews and financial case studies; that is, for the other components of the larger Artists Revenue Streams Project.

Question 9 of the survey provided respondents with three drop-down menus to indicate the primary, secondary, and tertiary musical genres in which they work. Each drop-down menu contained a list of 32 genres. Table 4 lists the responses, sorted by the primary genres that appear most frequently. The four most common genres within our sample are classical (34.7% listed it as primary), jazz (16.2%), rock or alternative rock (7.2%), and pop (4.5%). For analyses later in the paper, I have grouped some genres together into categories,[77] but Table 4 includes the data in the same form in which the respondents submitted it.[78]

Although 32 genres is a fairly long and diverse list, the survey also included an open-ended question in which respondents could supply a different or additional genre. Fully 1,155 respondents, or 21.5% of the sample, took the opportunity to do so. Several of the open-ended responses expressed frustration with the concept of a genre. Many more respondents supplied a long and detailed description of their music. These open-ended responses demonstrate the diversity of the population of musicians.

The survey also asked about the education level of respondents. Within the sample, 34.9% of musicians completed a graduate degree, and an additional 44.9% have a college degree, as described in Table 3. The sample is much more

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75. *See, e.g.*, *Pitchfork Music Festival Set Times Revealed*, PITCHFORK (June 22, 2011, 1:00 PM), http://pitchfork.com/news/42941-pitchfork-music-festival-set-times-revealed/ (listing artists and ensembles in a festival lineup in which the overwhelming majority of musicians were male).

76. For the 2010 Census, the analogous percentages were 72% white, 13% African American, 16% Hispanic, and 5% Asian. Press Release, U.S. Census Bureau, 2010 Census Shows America's Diversity (Mar. 24, 2011), *available at* http://www.census.gov/2010census/news/releases/operations/cb11-cn125.html.

77. The groupings are as follows: (1) classical; (2) jazz; (3) composers; and (4) rock, pop, and all other genres.

78. The genre "Broadway" was not included as an explicit prompt in the survey instrument, but many respondents wrote it in as their genre when prompted for other genres with an open-ended question.

educated than the general population, which is largely a function of the high proportion of classical and jazz musicians among our respondents. Table 3 shows that almost 74% of classical musicians, jazz musicians, and composers attended a music school or conservatory, and almost 80% of those respondents earned a degree in music (regardless of the type of school). The corresponding figures for musicians in all other genres were 38% and 36%. Working musicians in classical, jazz, and composition appear to benefit from an advanced degree.

2. Labor-Market Statistics

The survey also asked respondents about their personal annual income from all sources, music and non-music. The question was phrased in terms of ranges from "less than $20,000" through "$200,000 or more," in increments of $20,000.[79] Table 3 reports the percentage of respondents falling into various income brackets. The median annual income was $50,000, and the mean was $55,561. Thus, our sample includes people with relatively high incomes, compared to the general population. Even though this contradicts the stereotype of the starving artist, it fits with the educational profile of our sample.

The musicians in the sample vary widely in terms of the hours they spend working on music each week. We asked respondents to choose a range of hours from a drop-down menu that described "how many hours a week you currently spend performing, working on music and/or compositions, teaching, or developing your musical career." Table 3 shows the responses. Just over a quarter of respondents spend 15 hours per week or less on music; a similar proportion spend 16–30 hours per week; a little less than a quarter of respondents spend 31–45 hours per week; and a little more than one-fifth of respondents spend 46 or more hours per week on music.

As one might expect from the figures about hours spent on music, respondents also varied widely in the percentage of their overall income they "derive from being a musician, composer, performer, and/or teacher." Table 3 shows that 42.1% of all respondents earn 100% of their income solely from music. Almost a quarter of respondents derive 5–20% of their income from music; these may reflect a high proportion of amateurs, hobbyists, or musicians just starting out. The remainder of the sample is spread out fairly evenly in the range from 25–95%.

These data on hours worked and share of income from music can illuminate the proportion of respondents who are most clearly full-time musicians. One possible definition of "full-time" musicians would include those who spend 36 or more hours per week on music and who derive 75% or more of their income from music. I find that 32.3% of respondents meet that particular characterization of a "full-time musician." The survey did not directly ask respondents whether they held multiple jobs. So one cannot say for sure how many of the other respondents have multiple jobs, or whether any of those identified as full-time musicians have multiple jobs. But it stands to reason that many musicians who

79. Here, I mean "personal" in the sense of individual income, as opposed to household income.

make less than half their income from music and who spend 35 hours per week or less on music seem quite likely to have another, non-music-related job.[80]

The survey findings are consistent with earlier work on artistic labor markets. American artists—here referring to a broad category of architects and designers, performing artists (including musicians), visual artists, and authors—are known to work multiple jobs at a higher rate than those in other professions.[81] This definition of "full time" will appear again in Appendix D. In future work, my colleagues and I may use all of the categories in this table to help describe the differences between full-time and part-time musicians, and between professionals and amateurs.[82]

3. Estimated Music Income and the Groups for Analysis

The labor-market statistics reported in the previous Subsection are interesting in their own right. But they also serve an instrumental purpose. A central variable in this Article is the estimated income derived from music-related activities for each respondent. I can use two survey variables—personal annual income from all sources and the share of income from music—to calculate a variable I will call "estimated music income." Specifically, I did this calculation by picking points within each of the personal annual income ranges and multiplying by the share of income derived from music.[83] Figure 1 displays a histogram of the estimated music-related income distribution for our sample.[84] For most analyses in this Article based on estimated music income, the sample size is 5,013 respondents, for whom we had the necessary information to calculate that variable. The median of the distribution is $18,000; the mean is $34,456. Figure 1 shows the

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80. Alternative explanations—investment income, inheritance, government transfer payments—seem unlikely to explain the income mix of such a large portion of the sample.

81. NEIL O. ALPER & GREGORY H. WASSALL, MORE THAN ONCE IN A BLUE MOON: MULTIPLE JOBHOLDINGS BY AMERICAN ARTISTS 33 (2000), *available at* http://www.nea.gov/research/BlueMoon.pdf ("The moonlighting rates for all artists, which ranged from just under eight percent to almost fourteen percent during this period [from 1970 to 1997], averaged almost 40 percent higher than the rate for professional workers.").

82. Deciding who qualifies as a "professional" musician is a hotly contested issue among musicians. In future work, based on the qualitative interview portion of the larger Artists Revenue Streams Project, we plan to discuss this issue at greater length.

83. For the top income range of "$200,000 or more," we used a midpoint of $330,000. Our reasoning is that the top 5% of the income distribution comprises those making over $200,000 a year. So, to obtain a rough estimate of the median income for those making $200,000 or more, we took the mean of the 97th and 98th percentiles, which came out to $330,000. For the data we used for this calculation, see *Income Breaks, 2010*, TAX POL'Y CTR. (Jan. 6, 2011), *at* http://taxpolicycenter.org/numbers/displaya tab.cfm?DocID=2879. Although these data pertain to all tax units, not just to individuals, we are assuming that the shape of the distribution is similar for individuals earning $200,000 or more. For all other income ranges, we simply chose the midpoint.

84. The data used for Figure 1 are discrete, because they are constructed from the midpoints of income ranges and round-number income shares. The smoothed line in Figure 1 provides an estimate of the continuous music-related income distribution.

substantial proportion of working musicians who do not make a living at music; the 25th percentile of the distribution is only $5,000 per year. But the distribution also shows that a substantial portion of respondents earn a middle-class living. And a few respondents are in the high end of the income distribution overall and make all of their money from music.

Table 5 presents the main way of cross-tabulating the data that I will use in this Article. I will primarily use two variables to explain variation in how musicians earn their music-related revenue: their income bracket and their musical genre.[85] Table 5 uses eight income brackets, where income is estimated music income, and four genre categories: classical; jazz; composers; and rock, pop, and all other genres. "Composers" are best understood as a genre in the sense that many composers self-identify in this way; they are not confined to a particular musical style or movement, but they focus on the role of composer. This way of looking at the data—eight income groups and four genres—generates an 8-by-4 table with 32 subgroups of the survey sample.[86] I will use this form throughout the Article to illustrate the correlations between income groups, genres, and various other variables like revenue sources and trends in revenue. Sometimes I will not include the lowest-income group where it does not make sense to do so.

Table 6 reports statistics about organizational and professional affiliations. It shows that union membership, performing rights organization ("PRO") membership, other organizational affiliations, and the number of "team members" (for example, booking agents, managers, and attorneys) varies considerably by income bracket and by genre. Higher-income musicians tend to have more affiliations. High-income, classical, and jazz musicians are most likely to be in a union. Composers, of course, are extremely likely to affiliate with a PRO. They are also most likely to have other organizational affiliations. Rock and pop musicians (and those in other non-classical, non-jazz genres) are most likely to have larger teams. I can only conclude that these relationships in the data reflect correlations, of course, not a causal effect of affiliating with music organization or of hiring various team members. Still, it provides important institutional detail to understand which kinds of musicians affiliate more often and to know that earning more revenue comes along with a more complicated web of affiliations.

B. Revenue Streams

1. All Respondents

The central question about revenue asked respondents to allocate their revenue, in percentage terms, across seven broad categories of musical work and a miscellaneous "other" category. Here is the text of Question 12:

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85. To be clear, I am referring to explaining correlations in the data, not attempting to make causal inferences.

86. Appendices A, B, and C report the demographic, educational, organizational-affiliation, and labor-market statistics, respectively, for the 32 subgroups defined in Table 4.

> **12. In the past 12 months, what percent of your musician-based revenue falls into each of these 8 categories? The amounts in the 8 boxes must add up to 100%.**
>
> 1. **Money from songwriting/composing** including publisher advances, mechanical royalties, ASCAP/BMI/SESAC royalties, commissions, composing jingles and soundtracks, synch licensing, ringtone licensing, sheet music sales
>
> 2. **Salary as an employee of a symphony, band or ensemble**
>
> 3. **Touring/shows/live performances fees** earned by me as a solo performer, or by the bands/ensembles I'm officially a member of
>
> 4. **Money from sound recordings** including sales of physical or digital recordings (iTunes, CD Baby, traditional retail, sales at shows), payments from interactive services (Rhapsody, Spotify), SoundExchange royalties, master use licensing for synchs or ringtones
>
> 5. **Session musician** earnings, including payment for work in recording studio or for live performances, freelance work
>
> 6. **Merchandise sales** t-shirts, posters, etc.
>
> 7. **Teaching**
>
> 8. **Other**

As described above in Part II.E on attrition, Question 12 was the most taxing question for respondents in the entire survey. But with 5,371 respondents completing an answer, the question provides a look at the relative importance of different sources of musicians' revenue.

Figure 2 displays the mean shares of the eight categories of revenue among all respondents. In other words, this chart describes what proportion of revenue comes from each source, on average. Viewed this way, the largest revenue category for musicians is live performance (28%). Other relatively important revenue streams, on average, are teaching (22%); salaries, primarily for those in orchestras, chamber ensembles, or bands (19%); and session work (10%). Revenue from compositions and sound recordings each accounts for only 6% of the average musicians' revenue from music, a total of approximately 12%. Merchandise generated only 2% of revenue, on average. Other revenue sources, which do not fall into the other seven categories, account for the remaining 7% of musicians' revenue.[87]

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87. Appendix D details 20 revenue streams that would fall into the "other" category. We asked respondents to simply indicate, yes or no, whether they receive some revenue from these very detailed streams. Appendix D, then, allows one to gain an understanding of the kinds of revenue sources that fall into the "other" category. For example, 2.4% of respondents have received revenue from advertising-revenue sharing with YouTube. (The online video company now gives copyright owners the option to share in the revenue from advertisements shown next to user-created videos that infringe their

These aggregate statistics reveal some things about the relative importance of different revenue sources. They show that, for most musicians, money from live performances, teaching, and their orchestra salaries represent the greatest share of their music income. By contrast, money from compositions, sound recordings, and merchandise represent a smaller share of revenue, at least for the majority of musicians. But these averages across the whole population of musicians are just a starting point. From here, it is essential to study the variations in the revenue mix for different subgroups of musicians.

For example, the "salary" category is probably a characteristic of the working lives of classical musicians but less so for musicians in other genres. Indeed, that is the case. Thus, the large proportion of classical musicians in the survey sample explains the 19% share for the salary category in Figure 2. That salary makes up such a large portion of the aggregated "revenue pie" illustrates the importance of breaking down aggregate numbers by genre and other variables.

The small shares for compositions and sound recordings also reflect the large proportion of classical and jazz musicians in the sample. Orchestra players, in particular, would not earn money from owning composition copyrights. They would also earn very little, if any, of the money from sound recordings.[88] But for other musicians who focus on the activities of composing and recording to make their living, those revenue streams are likely to make up a larger share.

As a final example, only one-eighth of respondents earned any revenue from merchandise, but those who did earned an average of 14% of their revenue from that stream. Thus, merchandise did not generate income for the vast majority of musicians. But merchandise does play a moderate role for a certain subset of musicians.

Thus, one must take Figure 2 with a grain of salt and not over-generalize about how musicians earn revenue. A subsequent section will look at the revenue mix for different subgroups, particularly different income groups and musical genres.[89]

2. Relating Revenue Sources to Copyright Law

Each of the eight major revenue sources described in the previous Subsection can be characterized as having a different relationship to copyright law. Revenue from compositions and revenue from sound recordings are directly related to copyright, whether the respondent retained ownership of copyright or transferred copyright to an intermediary. Put another way, these two revenue

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copyrights.) It would be interesting to track that revenue stream over time to see whether more musicians began to see money from it.

88. Moreover, if a musician's orchestra releases a recording and earns revenue from it, the musician's compensation is most likely to come in the form of salary. Of course, some respondents do earn composition or recording revenue as members of a band or ensemble, despite not being composers or recording artists themselves. Many different contractual arrangements are possible.

89. *See infra* Part III.B.3.

sources consist of sales revenue, licensing revenue, and royalties that represent money paid for use of copyrighted works.

The claim of a direct relationship does not imply that copyright law is necessary for earning revenue from composing and recording. Rather, it is meant to be a descriptive claim that the collection of revenue from these sources occurs in relation to works that are subject to copyright protection. The motivation for describing composition and sound-recording revenue as directly related to copyright is to identify how much revenue might be serving as an incentive in this direct way. In other words, it is meant to provide descriptive information about the music industry that can feed into our normative policy evaluations.

I consider session work to have a mixed relationship to copyright for two reasons. First, in the survey questions' categorization, session work includes both recording sessions and live performances for hire. And our study could not separate session work on recordings (which would have a more direct relationship to copyright) from session work at live shows. Second, the session money from recording sessions does not relate to the respondent's ownership of a copyright; it is one further step removed and a little less direct. Thus, I classify session work in its own separate category of relation to copyright law.

The remaining five major revenue sources have either an indirect relationship to copyright or no relationship at all. I think this category of revenue can be useful regardless of one's position on whether the relationships of each source to copyright law are the same, or whether they are indirect or nonexistent. The key idea is simply to distinguish these five revenue sources from the other two categories of revenue sources.

Live-performance revenue might seem at first glance to be completely unrelated to copyright protection, because copyright protection has nothing to do with a concert venue's power to charge money to consumers for admission to a performance.[90] But in another sense, live performance revenue, along with merchandising revenue and the catch-all category of other revenue sources, may have an indirect relationship to copyright protection. Copyrighted recordings may serve to promote live shows, merchandise, and other sources of revenue. And if recordings are necessary to promote live performances and merchandise, then works subject to copyright would indirectly support revenue from live performances, merchandise, and other opportunities to earn income from music.

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90. Live musical performances are protected from unauthorized bootlegging. 17 U.S.C. § 1101(a) (2012). Because live musical performances are not fixed, and thus not copyrightable, Congress granted this protection under the Commerce Clause power. *See* 7 WILLIAM F. PATRY, PATRY ON COPYRIGHT § 24:7 (2012). But I leave this technical legal point aside. Arguably, the anti-bootlegging law helps prop up the price that concert venues can charge for admission. Although I am aware of no empirical evidence that demonstrates such a relationship, it is possible as a matter of economic theory. But even if that theory is true, I would consider the anti-bootlegging law's effect on ticket prices to be an indirect effect.

Another way to think of the relationship between these revenue sources and copyright law is to consider the institutions of the music industry. If copyright law is necessary for record labels, music publishers, PROs, and other music-industry intermediaries to exist, and if these intermediaries create opportunities to earn revenue and increase consumer demand for music, then copyright would be responsible—indirectly—for supporting live performance, merchandising, and other revenue. I am not necessarily arguing that this is the case. A survey about musicians' revenue cannot resolve the complicated microeconomic questions embedded in the question of what music-industry intermediaries do for consumer demand. But I want to use the term "indirect relationship" to allow for this possibility.

Salary income could have some relationship to copyright, because bands, ensembles, and orchestras sometimes earn revenue from copyrighted recordings. In those instances, part of the salary income would be derived from copyright—but the relationship would be indirect. Much of salary income, however, derives from other ways that orchestras and bands collect revenue, such as ticket sales for live concerts.[91]

Teaching revenue is the final revenue source in the "indirect or no relationship" category. It is possible that copyrighted recordings can serve as marketing and promotional material for a musician's work as a teacher. But one might also think of teaching positions and private teaching as having no relationship to copyright. Many music teachers would have teaching jobs regardless of the existence of copyrighted works.

With the above categorization in mind, Figure 3 takes the same aggregate data from Figure 2 and classifies revenue as directly related, indirectly related, and largely unrelated to copyright. Among all respondents, in aggregate, the shares of revenue from compositions and recordings add up to 12% of revenue that is directly related to copyright. Ten percent of revenue has a mixed relationship to copyright. And 78% of revenue has an indirect or no relationship to copyright. These figures provide important context for policy decisions. From the perspective of most musicians, or the average musician (which might be a misleading concept), copyright law is only directly responsible for one-tenth to one-fifth of their revenue. If copyright enhances revenue for most musicians, the relation would have to be indirect.

But again, Figure 3 provides aggregate figures. There are subgroups of musicians who make a much more substantial portion of their revenue from compositions, especially, and also recordings. These relatively copyright-reliant subgroups include composers and musicians in the highest brackets for music-related income, as described below.

Moreover, the fact that some musicians earn a great deal of their income from sources directly related to copyright could have broader importance. Because higher-income musicians earn a greater proportion of their revenue from sources

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91. *See, e.g.*, Vivien Schweitzer, *Survival Strategies for Orchestras*, N.Y. TIMES, May 29, 2011, at AR16 (discussing the reliance of orchestras on ticket sales).

directly related to copyright, it could be the case that copyright law is providing the financial incentive that motivates other musicians to move up the income ladder. In other words, in light of the revenue mix for high-income subgroups (described below), Figure 3 is still consistent with the superstar-economics version of the incentive theory of copyright. But Figure 3 is not consistent with the idea that copyright presently matters for most musicians. For most musicians, copyright's effect would be aspirational rather than marginal.

3. Revenue Mix by Income Group and Genre

It is crucial to delve within the aggregate statistics to determine how other variables correlate with musicians' sources of revenue. I will start by breaking the data down by income group, using the music income groups described in Table 5: seven brackets that differentiate respondents by their estimated income from music-related sources.[92] This fills in some important pieces of the picture. Compositions have much greater importance for the top percentile of estimated music income relative to the other income groups. Those who make less money from music tend to earn a greater proportion of their revenue from live performances. Teaching revenue is small for both the top and the bottom of the estimated-music-income distribution but is relatively large for those musicians in the middle of the estimated-music-income distribution.

Those who earn an estimated $330,000 from music annually report that revenue from compositions makes up 28% of their music-related revenue.[93] In one sense, this simply tells us that composition revenue can accompany success. But this could also lend support to what many music attorneys say: publishing revenue is "mailbox money."[94] In other words, compositions can produce royalty checks on a regular basis year after year. Those musicians who keep their songwriting copyrights tend to do much better financially. Interestingly, this high-income group also makes a statistically significant larger share of revenue from session work. Perhaps some high-earning musicians in the sample are those whose skills in playing musical instruments are in high demand.

Sound recordings, on the other hand, do not display the same pattern of variation by income group. In fact, sound recordings do not exceed a 5% share for any of the income groups in the top half of the estimated-music-income distribution. But sound recordings make up 6% of revenue for the sixth income group (percentiles 51–75) and 9% of revenue for the seventh income group (percentiles 76–93). This suggests that sound recordings have greater relative

92. The eighth row of Table 5 represents those respondents who earned no income from music over the previous 12 months. This income group—which represents 7% of the sample, or percentiles 94 through 100 of the estimated-music-income distribution—is left out of any subsequent analyses that concern earned revenue.

93. The difference in composition revenue's share between the top income group and any other income group is statistically significant at the 1% level.

94. *See* MCLEOD & DICOLA, *supra* note 19, at 86 (quoting music lawyer Anthony Berman about the concept of "mailbox money"). Publishing revenue refers to revenue from composition copyrights.

importance for lower-income, part-time, and younger musicians. Selling recordings might be a way to get started in the industry. For higher-income musicians accumulating revenue streams, however, composition royalties have a much larger role in earning revenue.

Figure 5 displays the differences in revenue shares by genre, or more specifically by the four genre categories used in Table 5 above: classical; jazz; composers; and rock, pop, and all other genres. Classical musicians have, on average, little revenue from compositions (a 2% share) or sound recordings (a 1% share). Classical musicians rely much less on live performance revenue—only 10% of their revenue, on average, comes from direct payments for tours, shows, or other live performances. Instead, classical musicians earn 36% of their revenue from salaries, presumably from orchestras or chamber ensembles. Classical musicians also earn 33% of their revenue from teaching on average, more than musicians in any other genre.

Jazz musicians earn 37% of their revenue from live performances and 15% from salary income, roughly the opposite of classical musicians.[95] Jazz musicians also earn 24% of their revenue from teaching, on average. The revenue streams directly related to copyright have greater importance for jazz musicians. But the average share of revenue for jazz musicians is still only 3% from compositions and 4% from sound recordings.

Unsurprisingly, the self-identified composers rely heavily on composition revenue, garnering 39% of their revenue from that source. Teaching is also important to composers, making up 24% of their revenue.

Musicians in rock, pop, country, folk, and all other genres earn 8% of their revenue from compositions and 10% from recordings. They rely heavily on live performance revenue, which comprises 40% of their total. Teaching and session work are less important for musicians in this grouping of genres but still have 13% and 9% of revenue, respectively.[96]

The statistically significant and economically important differences between income groups and between genres demonstrate that musicians are a diverse group in terms of how they earn revenue. Table 7 combines these two dimensions to repeat the analysis of Figure 3, about the relationship between revenue and copyright law, in a more subtle way. Table 7 is a 7-by-4 table with a three-shade pie chart in each cell. The black slice represents the revenue sources directly related to copyright, the medium-gray slice represents session work (with

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95. All differences discussed in this paragraph regarding the classical genre are statistically significant at the 1% level.

96. A few interesting differences among genres are obscured by grouping every genre that is not in the classical, jazz, or composer categories. For example, hip-hop, electronic, experimental, avant-garde musicians, taken together as a group, earn more revenue from compositions and recordings. Rap and hip-hop musicians also earn more of their revenue from the "other" category, which may include a number of branding and persona-licensing components. The elements of the "other" category are described in more detail in Appendix D.

its mixed relationship to copyright), and the light-gray slice represents all the revenue sources.

Table 7 vividly illustrates the differences in revenue mix by income group and genre. The highest-income composers rely very heavily on revenue sources with a direct relationship to copyright law. If the incentive theory of copyright is correct, then this group would be most affected by it.

Classical and jazz musicians display some interesting patterns. No income group of classical musicians relies much at all on sources directly related to copyright. But jazz musicians in the top three income groups—the top 10% of the music-income distribution—have some reliance on sources directly related to copyright. Session work is important only for the highest-income and lowest-income classical musicians, but less so for those in the middle of the income distribution, who are predominantly music teachers. Among jazz musicians, however, session work has some importance to those in all income groups.

Among rock, pop, and all other genres, the big divide comes between the top two income groups—the top 5% of the music-income distribution—and the other income groups. For the very richest rock and pop musicians, revenue sources directly related to copyright make up approximately one-quarter of their revenue. The revenue source with a mixed relationship (session work) makes up another quarter.

Table 7 shows that some subgroups really do appear to rely on revenue from sources with a direct relationship to copyright law. But for other subgroups, most revenue comes from other sources, some of which might have an indirect relationship to copyright but some of which have no connection to copyright at all.

Because the revenue mix for musicians varies so much by income group and genre, it is worth considering the average dollars from each of the eight major revenue streams rather than the average share for each stream. Figure 6 considers the average dollars from each stream for all respondents. Compared with Figure 2 (which showed average shares), composing, teaching, and salary have greater shares, whereas live performances and sound recordings have smaller shares. This is another way of seeing the fact that higher-income musicians rely more on composing, teaching, and playing in orchestras or bands. Figure 7 shows the average dollars from each stream by genre. It illustrates the predominance of salary and teaching revenue for classical musicians, the significance of live performance and teaching revenue for jazz musicians, and the outsized role of composition royalties in composers' income. Figures 6 and 7 reinforce the message of Table 7 that income group and genre account for a great deal of variation in musicians' mix of revenue sources.

C. Trends in Revenue Streams

1. Changes in Major Revenue Streams over Time

To fill in for the lack of panel data tracking musicians' revenue over time for recent years, the survey asked musicians for their perceptions about how their revenue streams have changed over the past five years. Table 8 sorts the streams from the highest proportion of respondents reporting an increase to the lowest

proportion. One way to look at the data in Table 8 is to subtract the percentage of respondents reporting a decrease from the percentage of respondents reporting an increase. Based on that metric, the teaching revenue stream has grown for the largest proportion of respondents, followed by compositions. Three other streams—salaries, session work, and recordings—have been decreasing for more people than they have been increasing.

Table 9 takes the familiar 7-by-4 table framework and reports the share of respondents in each cell of the table who experienced an increase, no change, or a decrease in composition revenue over the previous five years. Analogously, Table 10 reports the share of respondents in each cell of the table who experienced an increase, no change, or a decrease in sound recording revenue over the previous five years. Light shading indicates the cells in which more respondents reported an increase than reported a decrease. Very pale shading indicates the cells in which an equal percentage of respondents reported an increase as reported a decrease.

Table 9 shows that, for most income group-genre combinations, more survey respondents experienced increases in composition revenue than reported decreases. Exceptions include the middle-income brackets of jazz musicians (rows 5 and 6 of the table) and the rock and pop musicians in the top quarter of the income distribution but outside the top 10% (row 4 of the table). For most classical musicians, the composition revenue stream is not relevant. For most composers, composition revenue has been increasing over the past five years.

Table 10 tells a very different story for sound recordings. Only three kinds of subgroups experienced increases in sound recording revenue over the past five years: composers in the top 1% of music income; rock and pop musicians in the top 5%; and rock and pop musicians in the bottom half of the income distribution. Partly, the correlation is just mechanical—the highest-income musicians are more likely to report increases in revenue streams, because increases in revenue streams may be what put them into the top income brackets. But these data are also consistent with a winner-take-all dynamic playing out with respect to sound recordings.[97] The increases in sound recording revenue for those in the bottom half of the music-income distribution in the rock, pop, and other genres could be explained by the concept that these lower-income musicians are slightly younger, are working part-time, and are just breaking into the music industry.

Taken together, Table 9 and Table 10 provide important context for debates on copyright policy. Of the two major categories of musicians' revenue that relate directly to copyright, one of them is increasing for most musicians and one is decreasing for most musicians. With the appropriate caveats about the limitations of self-reported data, this kind of information should be part of our public debates about the effect of digital technology on incentives for creation.

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97. Data on the distribution of sound recording revenue is also consistent with the winner-take-all model of the labor market for musicians. Over 40% of the survey respondents who earn some revenue from recordings earn $1,000 or less from that revenue stream. At the top end, I estimate that 5% of musicians who earn some revenue from recordings earn $17,000 or more, with 1% earning $59,500 or more from recordings.

2. Changes in More Specific Revenue Streams over Time

The survey posed questions about roles, which appeared in the middle of the survey, to those respondents who chose to take the long or medium versions.[98] Each set of role questions asked about a particular role that musicians may play: composer, recording artist, live performer, session musician, or teacher. In this Article, I focus on the questions concerning those who compose and those who record. Recall from Part II.E that respondents taking the medium version only saw questions about the role that generated the most money for them.

Within each set of role questions, the survey drilled down into specific revenue streams. The questions focused on compositions covered the following specific streams: mechanical royalties,[99] commissioned songs or pieces, PRO royalties,[100] original works for TV and film, and sales of sheet music. The questions focused on sound recordings covered financial support from record labels, retail sales at traditional "brick-and-mortar" stores, online retail, retail at live performances, royalties from on-demand streaming services,[101] and webcasting royalties disbursed by the collecting society SoundExchange.[102] Finally, two sets of role questions were asked of both composers and recording artists. These questions focused on synchronization licenses[103] and ringtone licenses.

Across both the long and medium versions of the survey, there were 1,109 respondents who received the composition questions and 1,054 respondents who received the sound recording questions. For each specialized revenue stream, the survey asked the relevant respondents whether they have ever earned revenue from that specialized revenue stream.

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98. *See supra* Table 1 (describing the structure of the survey).

99. Mechanical royalties are royalties to composers based on reproductions of their work, such as compact discs or digital downloads. The mechanical royalty rate is typically negotiated, but those negotiations occur in the shadow of a compulsory licensing rate of 9.1 cents per copy. *See* 17 U.S.C. § 115(a)(2) (2012).

100. PRO royalties are paid to composers based on public performances of their work, such as radio airplay and performances at concert venues.

101. On-demand streaming services include Rhapsody, Mog, Rdio, and Spotify. Because these services are "interactive," they are not eligible for the statutory license for webcasting under 17 U.S.C. § 114.

102. SoundExchange is the designated collecting society for royalties generated by non-interactive webcasters, including Pandora. *See id.* Pandora has features based on user preferences but is non-interactive under the definition of the Copyright Act because users cannot hear particular songs on demand. *See, e.g.*, Ben Sisario, *Proposed Internet Radio Royalty Bill Would Change Rate-Setting Standard*, N.Y. TIMES, Sept. 24, 2012, at B2 (mentioning Pandora's classification as non-interactive).

103. Synchronization licenses refer to licenses of compositions and sound recordings for use in films, television shows, television commercials, or other audiovisual works. *See* James A. Johnson, *Thou Shalt Not Steal: A Primer on Music Licensing*, 80 N.Y. ST. B.A. J. 23, 24 (2008) (defining "synch license"). The idea is that the video images are synchronized with separately produced, and often preexisting, music.

Figure 8 takes the "Increase," "No Change," and "Decrease" responses and displays them as a bar graph to facilitate comparisons. A majority of recording artists reported increases in royalties from online retail sales (58%) and on-demand streaming (51%). A near-majority reported increases in webcasting royalties from SoundExchange (46%). Unfortunately, the survey did not ask respondents to assign shares of revenue to these detailed revenue streams; based on beta testing of the survey, that level of detail was too much to ask. Thus, I cannot characterize the amount of increase in revenue from online music that the survey respondents have experienced. Still, the reported increases in these streams suggest that royalties from online sources are beginning to reach musicians and increase in a perceptible way.

The subset of respondents who indicated an increase or decrease in a specific revenue stream were asked follow-up questions seeking musicians' explanations for the change over time. Respondents were free to check as many boxes as they wished next to the suggested explanations, or in some cases to provide their own interpretation in an open-ended "other" category. Appendix E reports the reasons to which respondents attribute the positive trends in these three specific revenue streams. The responses reflect what one might expect about the shift from physical media to digitally encoded music, the rise of other online music retailers like Amazon to compete with iTunes, and the recent proliferation of on-demand streaming services.

Figure 8 also shows how some of the negative trends in the industry are affecting musicians' revenue. Fifty percent of respondents who compose reported a decrease in mechanical royalties, but less than half as many (24%) reported an increase. Unsurprisingly, sales of recordings in traditional retail stores showed a distinctly negative trend, with 50% of respondents who record music reporting a decrease. Financial support from record labels is also in decline; 41% of those recording artists with record-label contracts reported a decrease in financial support against only 9% who reported an increase. This accords with my colleagues' findings in the separate, qualitative-interview phase of the larger project.

The reasons given for the three specific revenue streams for which the most respondents reported declines appear in Appendix F. The most popular explanation for the decline in mechanical royalties was straightforward: lower sales of recordings featuring the respondents' compositions. Many other respondents cited a general decline in demand for music sales. Only 15% of respondents who reported a decrease in mechanical royalties blamed the shift in the digital music marketplace from buying albums to buying individual songs. In terms of musicians' perceptions, at least, this contradicts one of the going theories of the music industry's recent decline.[104]

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104. *See, e.g.*, KNOPPER, *supra* note 41, at 177–78 ("[L]abels made just 67 cents on every 99-cent song, a decent percentage, but far, far inferior to taking roughly $10 to $12 on every $18 CD."); LEVINE, *supra* note 2, at 68 (describing the shift from albums to singles as harmful to total revenue from music sales).

A majority of recording artists pointed to label-wide cutbacks as the explanation for the reduction in financial support that they experienced. But a little more than one-third of those reported a decline in label support because they left their label to pursue a strategy of releasing their own music.

Finally, the leading explanations for the decline in traditional retail sales are common sense: lower demand and fewer stores. The disappearance of the music-focused retail chains (like Tower Records) and the shrinking space devoted to music in big-box stores (like Wal-Mart and Best Buy) are well documented and one of the starkest facts about the recent history of the music industry.[105] Interestingly, 29% of the respondents who reported a decline in traditional retail sales indicated that some of their recordings have gone out of print.

The results of a survey, administered at one specific moment in time, have limited ability to inform us about trends. In discussing trends, I have to rely on respondents' perceptions of the previous five years, which may not reflect the financial reality. Even acknowledging those limitations, the information about trends provides perspective for important issues in copyright policy. It also suggests that repeating the Money from Music Survey in the future could be very fruitful.

D. Attitudes Toward Technological Change

Table 11 provides background on different subgroups' use of and familiarity with technology. Each cell in the 8-by-4 table reports two variables. The first, labeled "Web use," provides the average score on five questions about using the Web to produce, promote, distribute, collaborate on, and connect with fans about music.[106] The second, labeled "services used," counts up the number of Web-based tools that each respondent reported using to promote, distribute, or sell their music.[107] Cells in Table 11 are shaded according to the average number of Web tools used, with darker shades indicating a greater average. What Table 11 shows is that musicians in rock, pop, and other genres make the most use of and employ the widest variety of web tools. Composers, jazz musicians, and classical musicians trail behind, in descending order of Internet use. Moreover, lower-income musicians tend to use Internet tools more in rock and pop. In contrast, it is the middle-income musicians in classical and jazz who do so. The results in Table 11 provide important context for the data on attitudes in the remainder of this section.

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105. *See, e.g.*, George Varga, *Facing the Music: Despite Vinyl Resurgence, the Digital Tide Is Threatening Merchandisers*, SAN DIEGO UNION-TRIB., May 24, 2009, at E1.

106. Scores for the individual questions were on a four-point scale, ranging from "I don't use them" to "Not that comfortable" to "Somewhat comfortable" to "Very comfortable."

107. The web tools included: "artist website or blog," Bandcamp, Bandletter, Bandzoogle, CASH Music, CD Baby, Facebook, Fanbridge, Flickr, Foursquare, Mailchimp, MySpace, Next Big Sound, Nimbit, ReverbNation, Rumblefish, Songkick, Sonicbids, Soundcloud, TAXI, Topspin, Tumblr, Tunecore, Twitter, and YouTube, along with an open-ended prompt for other services.

The survey asked all respondents to react to a series of ten statements. (The SurveyMonkey software delivered the statements to respondents in random order.) We prompted a response based on perceptions of technological change by phrasing the question as follows: "Thinking back over the past five years, how have emerging technologies and the Internet affected your musical career?" Respondents answered on a five-point Likert scale ranging from "Strongly Agree" to "Strongly Disagree." Figure 9 reports the results for the entire sample.[108]

The strongest agreement came in reaction to the statements "It's more competitive than ever," and "I can communicate with my fans directly." These are fairly uncontroversial statements, but they do reflect the pressures of the pace of change in the modern music business. In the qualitative interviews and in separate anecdotes, my colleagues have heard some musicians describe the increasing amount of time that their website and their social networking platforms demand. On the other hand, the statement "My day-to-day work is more about promotion than creation" received only mixed agreement.

The strongest disagreement came in response to the statement: "I have less control over my work." Thus, technology does not result in a feeling of less control; certainly it can offer musicians more control and more options. Two of the statements presented to survey takers related to the hot-button issue of unauthorized file-sharing: "Unauthorized file-sharing has made it more difficult for me to earn income," and "My music has been devalued." Each statement received slightly more indications of strong agreement than of strong disagreement. But the differences are only slight. Moreover, the statement "I can make more money as a musician" prompted slightly more agreement than disagreement. The hypothesis that musicians would hold diverse opinions on the subject proved to be correct.[109]

Finally, one can describe the average sentiment toward Internet technology within various subgroups. To do this, I calculated the valence of each respondent's view of the Internet's effect on their career in music by adding the responses to the five positive statements, then subtracting the responses to the five negative statements. This created a composite scale from –20 to 20, with 20 being the most positive.[110]

Table 12 reports the average attitude toward technology within each subgroup along the dimensions of income and musical genre. The lowest-income groups—including those who made no money from music in the previous year—reported the most positive attitudes about the Internet. The highest-income groups were the least positive, just barely registering an average above zero on the composite scale. The rock and pop musicians were the most positive about

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108. Because of attrition during the survey, the number of observations for reactions to each statement varies between 4,563 and 4,617. Respondents were free to leave their reaction to certain statements blank.

109. *See supra* note 49 and accompanying text.

110. A score of 20 would result from a response of "5" (strongly agree) to all five positive statements about the Internet's effect on music and a response of "1" (strongly disagree) to all five negative statements. A score of –20 would reflect the reverse.

technology; the classical musicians, jazz musicians, and composers in the top half of the income distribution were less so.[111] These results confirm the diversity of opinions about the Internet among musicians and show that income bracket and genre explain some of the variation.[112]

IV. IMPLICATIONS

This Part covers the major themes and policy implications of the survey findings. The musician population is diverse and specialized. Individuals can work as musicians on a part-time or full-time basis. Live performance fees make up a large share of revenue for most respondents, but merchandising revenue is just a small fraction. Each of the revenue categories the survey asked about has a different relationship to copyright law. With that perspective in mind, the survey findings provide information about the degree to which different subgroups of musicians depend on copyright protection. In particular, composers, higher-income musicians, and to a lesser extent rock and pop musicians earn a larger share of their revenue from sources directly related to copyright. The survey findings provide evidence of the ways that technological change is affecting musicians' revenue. This Part concludes with a discussion of what the survey data do not include and the implications for future research.

A. The Diversity of Musicians

Musicians play multiple roles in their music-related work: composer; recording artist; live performer; session musician; teacher; salaried player in a band, ensemble, or orchestra; administrator; and so on. Among survey respondents, 89% reported playing two or more of these roles and 39% reported playing four or more. The multiplicity of musicians' roles reflects the flexibility that the profession requires. Each musician is like his or her own small business; musicians have to be ready to adjust to different opportunities and changing consumer demand. The fact that musicians take on multiple roles may also tell us something about policy. Technological and legislative changes can affect how remunerative certain activities are. For example, our respondents reported a decline in mechanical royalties over the past five years,[113] making it harder to earn revenue in the composer role (all else being equal). Policymakers should expect musicians to adjust their allocation of time among roles in response to such changes.

The survey data also show the diversity of musicians in terms of genres. Musicians within different genres have different ways of making money from music. Classical musicians rely more heavily on salary income, while rock musicians rely more heavily on live performance fees. Thus, when a particular

111. The three jazz musicians in the top 1% of the music-income distribution had very negative opinions of the Internet's effect on their careers. See Table 5 for the sample sizes of each cell in the 8-by-4 or 7-by-4 income-group-versus-genre tables.

112. The differences discussed in the text were significant at the 5% level.

113. *See supra* Part III.C.2.

policy changes the prospects of a particular revenue stream, that policy will not affect musicians in all genres in the same way.

B. Musicians' Working Situations

Working as a musician can be a full-time job, demanding over 60 hours per week. It can also be a part-time pursuit, undertaken while holding another job. The survey data show that musicians vary widely in terms of the number of hours per week they spend on music and the percentage of their income they derive from music-related work. This has important implications for policy. A small increase in revenue might not shift the average musician into a situation where he or she can spend more hours per week on music. Economic theories of intellectual property often focus on a property-rights perspective and leave out the labor-economic perspective. The labor-outcome statistics, combined with the revenue statistics, show the importance of considering how copyright-related revenue will actually affect different subgroups of musicians.

The survey findings, reported in Appendix C, show that musicians vary widely in terms of the number of hours they spend on music each week. The distribution of hours spent on music is relatively flat. There were roughly the same number of respondents within each category of hours spent on music per week.[114] Moreover, musicians vary in terms of the percentage of income they derive from music. Over 40% of respondents earn all their income from music. About a quarter of respondents make 10% of their income or less from music. The remaining fraction is distributed quite evenly in between, ranging from a 15% share to a 95% share of income derived from music.

These facts about hours worked and the percentage of income from music mean that there is a spectrum rather than a simple distinction between full-time musicians to part-time musicians. This spectrum from full-time to part-time says something important about how the incentive theory of copyright must operate in practice. According to the theory, increasing financial rewards induce more creative effort. But some musicians are on the part-time portion of the labor-economic spectrum, for example, because they have second jobs. In such instances, any increase in copyright incentives might have to be enough to allow the musician to quit his or her second job. Otherwise, the musician might not have the flexibility to spend more time on music.[115]

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114. A similar fraction of respondents spend 6 to 10 hours per week on music as spend 16 to 20 hours, 26 to 30 hours, 36 to 40 hours, or 46 to 50 hours.

115. This point draws on the distinction in labor economics between the extensive margin, the decision whether to work, and the intensive margin, the decision of how many hours to work. *See* James J. Heckman, *What Has Been Learned About Labor Supply in the Past Twenty Years?*, 83 AM. ECON. REV. 116, 116 (1993). Consideration of the extensive margin can be generalized to include not just whether a person works but how many jobs. *Cf. id.* ("A crucial theoretical distinction with important empirical payoff is that between labor supply choices at the extensive margin (i.e., labor-force participation *and employment choices*) and choices at the intensive margin (i.e., choices about hours of work or weeks of work for workers)." (emphasis added)).

The survey included additional questions, not discussed in Part III, about which activities respondents would like to spend more time on. Teaching makes up a large and increasing share of revenue for musicians in all genres. Still, many musicians do not see this as desirable. Of the respondents who teach, 40% answered that they would prefer to spend less time on teaching, while only 26% want to teach more. This response was in line with those about time spent on managerial and administrative activities. By contrast, a vast majority of respondents want to spend more time composing, recording, and performing. Among survey respondents, 61%, 69%, and 65%, respectively, would prefer to spend more time on those activities. In other words, teaching may be providing a large and increasing share of musicians' revenue, but for a segment of musicians that situation is dissatisfying. Making ends meet financially often leads musicians to take on multiple roles in the music industry. As a result, they may not have the flexibility to respond to copyright's incentives for creation.

C. Live Performance Fees and Merchandising Revenue

Part of the conventional wisdom about musicians is that in the face of declining revenue from the sale of recordings, they can simply rely on live performance fees and merchandising revenue.[116] The survey findings suggest that this is only half accurate. That respondents earned an average of 28% of their revenue from live performances confirms the increasing economic importance of live music for performers. Live performance fees represent a large share of revenue for musicians in all genres, with the exception of classical musicians. Classical musicians are more likely to be salaried members of an ensemble or orchestra; thus, many of them depend on live performance fees indirectly through their salaries.

But merchandising, branding, and licensing of one's persona make up only a tiny fraction of musicians' revenue, despite the increased prevalence of social networking. Merchandising revenue is a tiny sliver of musicians' revenue "pie." The average share of the merchandise revenue stream is just 2%. Some of the specific streams within the "other" category (which averages 7% of total revenue) relate to branding, endorsements, and licensing of one's persona. But relatively few musicians reported earning revenue from those particular streams. The bottom line is that only 5% of musicians earn 10% or more of their revenue from merchandise. And only 1% of musicians earn 35% or more from this stream. In sum, even though T-shirts are really expensive at concerts by superstars, that revenue stream is not a primary source of revenue for many musicians at all. This contradicts the canard that musicians "can just sell T-shirts" to make up for declining sales of recordings.[117]

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116. *See, e.g.*, Peter K. Yu, *Digital Copyright and Confuzzling Rhetoric*, 13 VAND. J. ENT. & TECH. L. 881, 901–07 (2011) (discussing the perception that musicians can rely on live performance and merchandising revenue).

117. *See, e.g.*, Robert Danay, *Copyright vs. Free Expression: The Case of Peer-to-Peer File-Sharing of Music in the United Kingdom*, 8 YALE J.L. & TECH. 2 (2006) ("These arguments recognise that for most musicians, live performances in particular but

D. Revenue's Relationship to Copyright

The survey data also provide context for more-specific policy evaluation. Recently, high-profile legislative efforts have sought to enhance copyright enforcement.[118] Suppose those efforts succeeded in combating unauthorized downloading of recorded music. Further suppose that those efforts caused a 20% increase in revenue from composition royalties and the sales of recordings. This would represent an enormous success for copyright enforcement efforts, one that is unheard of to date. For the subgroups of musicians who rely more heavily on revenue sources directly related to copyright—like composers and high-income musicians—the policy could (in theory) increase their income a great deal right away. They are currently enjoying the fruits of copyright protection, and their revenue would increase in the short term. I should add that in economic terms, this would only be a partial equilibrium effect, meaning that we have isolated our viewpoint to a musician collecting revenue for the goods and services that he or she provides.[119] This hypothetical does not consider any indirect, complicated, general equilibrium effects from strengthening copyright enforcement, such as increased costs for the use of copyrighted works or shifts in consumer behavior away from copyrighted goods that could occur as ripple effects.[120]

What partial equilibrium effect would stronger copyright enforcement have? As the survey results show, most musicians earn a relatively small portion of their revenue from sources directly related to copyright and a similar portion from session work (which, as a category in the survey, has a mixed relationship to copyright). Thus, a hypothetical boost in revenue from more effective enforcement would only increase the average musician's total revenue by a small amount today, in the short term. Stronger copyright enforcement might provide them incentives to move up the income ladder in a winner-take-all kind of market. It will not, however, put more money in their pocket today. Of course, we must also consider how complicated the economics of the music industry really are. Taking more of a

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also endorsements, advertising, public appearances, and secondary licensing of merchandise and 'tie-in goods' (such as posters, T-shirts, etc.) remain the primary sources of income to be gleaned from their music.").

118. Two controversial pieces of draft legislation—the Stop Online Piracy Act ("SOPA") in the House of Representatives and the Protect Intellectual Property Act ("PIPA") in the Senate—are the most recent examples of attempts to enhance copyright enforcement. For an overview of the controversy with links to both news accounts and editorials by some of the principals, see *Copyrights and Internet Piracy (SOPA and PIPA Legislation)*, N.Y. TIMES (Feb. 8, 2012), http://topics.nytimes.com/top/reference/timestopics/subjects/c/copyrights/index.html (last visited Mar. 4, 2012).

119. *See* Glynn S. Lunney, Jr., *Copyright's Price Discrimination Panacea*, 21 HARV. J.L. & TECH. 387, 389 (2008) (describing partial equilibrium analysis as the study of effects "only for the specific market at issue—the market for a specific copyrighted work or for copyrighted works more generally—and ignor[ing] or assum[ing] away any effects on the remainder of the economy").

120. *See, e.g.*, *id.* at 404–39 (working from a partial equilibrium model to a more complicated general equilibrium model by considering a much wider variety of economic effects).

general equilibrium perspective would mean considering the role of the music industry's many intermediaries. If the hypothetical copyright enforcement legislation helps those entities, it is possible that musicians might benefit from greater royalty income and other changes in intermediaries' policies. For instance, better enforcement could help record labels' bottom lines to an extent that the labels could begin offering larger advances and greater support to artists again.[121] Nothing in the Money from Music Survey, which focused on the money that reaches musicians' bank accounts, can confirm or deny this story. Thus, it is important to remain open to the possibility that copyright enforcement might indirectly benefit musicians by strengthening the system in which they work. This might seem unlikely for a host of reasons. But this must temper any conclusions one draws about the meaning of the fact that the vast majority of musicians do not benefit directly from copyright.

Overall, some musicians are more dependent on revenue streams that are directly related to copyright than others. The variation in musicians' sources of revenue is important; it shows that musicians have a wider range of roles and revenue sources that go beyond composing and recording. Musical creativity takes a number of forms, not just the kinds that copyright law protects. This broader perspective should not, however, obscure the reliance on copyright for many musicians in particular subgroups. To return to a key example, those who focus their activity on composing rely on composition revenue and are much more vulnerable to harm from copyright infringement. The same goes for recording artists who rely on sales of sound recordings. The best approach for policymakers is to craft copyright policy that accommodates the diversity of musicians—and perhaps to begin thinking about a policy for the music industry that goes beyond copyright.

To reach the broader population of musicians, as well as those who benefit from copyright, more creative policy thinking is needed. Policymakers should recognize the range of roles, genres, and working situations of the musician populations. In addition to copyright reform, other policies could provide incentives for creativity in other ways. Examples include municipal policies toward venues for live performances,[122] music education programs in schools,[123]

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121. In both the survey and the qualitative interviews, we have found that advances on future royalties and financial support for promotion, videos, and other items have declined over the past five years.

122. *See, e.g.*, Erica C. Barnett, *Taking Back the Nightlife: Club Owners Challenge Nickels's Clampdown*, STRANGER, July 20, 2006, at 10 (describing battles over local ordinances in Seattle that burden concert venue owners); Ben Joravsky, *Keep Up the Fight—Or Watch Out*, BLEADER (May 13, 2008, 9:36 PM), http://www.chicagoreader.com/Bleader/archives/2008/05/13/keep-up-the-fight-or-watch-out (explaining the controversy over a proposed event promoters ordinance in Chicago).

123. A study by the NEA shows that the percentage of 18-year-olds who received some music education in childhood has declined precipitously among African Americans and Hispanics over the past three decades. *See* NICK RABKIN & E.C. HEDBERG, ARTS EDUCATION IN AMERICA: WHAT THE DECLINES MEAN FOR ARTS PARTICIPATION 15–16 (2011), *available at* http://nea.gov/research/2008-SPPA-ArtsLearning.pdf.

and efforts to support local arts communities.[124] Learning more about how copyright incentives actually function can help Congress reform copyright law in sensible ways—and also point out the need for policies beyond copyright that would benefit musicians and the listening public.

E. Shifts in Revenue Due to Technological Change

The transition to digital encoding and Internet distribution presents both threats and opportunities for musicians and the music industry as a whole. Many observers predicted doom for record labels and music publishers while heralding freedom for musicians to market their work directly to their fans.[125] Others predicted that musicians would go down with the intermediaries—there would be no revenue left for creators, either.[126] It is unfortunate that one cannot trace the precise path of the last 10–15 years based on what we learn during the Artists Revenue Streams Project. But one can describe the current state of affairs and sort out which of these millennial predictions came closest to coming true. More importantly, we can lay down a baseline of facts for the sake of future policymaking.

For now, the key findings about changes over time simply confirm the news that has been reported for the past decade. Revenue sources like traditional retail, sheet music, and mechanical royalties have suffered.[127] Online retail, on-demand streaming, and webcasting are beginning to grow.[128] In future work, I plan to study more closely which subgroups of musicians are participating in these new streams at higher and lower rates. Revenue from on-demand streaming, in particular, has begun to generate controversy as musicians complain that the royalty rates are too minuscule.[129] At this point, the streams are too new for the

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124. *See* Robin Pogrebin, *Consortium Views Arts as Engines of Recovery*, N.Y. TIMES, Sept. 15, 2011, at C1 (profiling the Department of Housing and Urban Development's ArtPlace initiative, which provides grants to local communities for arts and culture projects).

125. *See, e.g.*, Eben Moglen, *Liberation Musicology*, NATION, Mar. 12, 2001, at 5, 5–6 (describing the music industry as "dying" and heralding an era of "anarchic distribution").

126. *See, e.g.*, John Borland, *Musicians Launch National Anti-Napster Campaign*, CNET.COM (July 11, 2000, 3:20 AM), http://news.cnet.com/Musicians-launch-national-anti-Napster-campaign/2100-1023_3-243021.html (describing the views of major-label artists that unauthorized file-sharing threatened their incomes).

127. Traditional music-retail chains took the first and biggest hit in the music industry's recent upheaval. *See* Knopper, *supra* note 41, at 212–13 (describing the demise of the Tower Records retail chain).

128. This accords with news reports of the intensifying competition among on-demand streaming services. *See* Antony Bruno, *Subscription Renewal: Rhapsody, MOG Upgrades Point to Forces Reshaping On-Demand Streaming Music Services*, BILLBOARD, Sept. 24, 2011, at 5.

129. *See* Zoe Keating, *Zoe Keating on Spotify, Fairness to Indie Artists & Music's Niche Economy*, HYPEBOT.COM (Sept. 26, 2011), http://www.hypebot.com/hypebot/2011/09/zoe-keating-on-spotify-fairness-to-indie-artists-musics-niche-economy.html (criticizing

survey data to provide the necessary insight into those concerns. Repeating the survey at regular intervals in the future to track the growth of these streams could produce interesting results.

F. Limitations of the Survey and Implications for Future Research

In the survey and throughout this Article, I have focused on revenue. The obvious missing piece in the analysis is the cost side, because net income or profit is what ultimately matters. Revenue streams can vary across categories in terms of profitability. Merchandising margins can be small, whereas salary revenue may have few offsetting costs borne by the musician personally. Tours can be expensive enough to cancel out any revenue earned. Professional recording expenses and promotional budgets could be more or less than recording revenue, depending on the success of the recording. The profitability of each revenue stream can also vary over time. A composition is expensive in terms of opportunity cost in the year it is created, but it can earn revenue for years, perhaps with relatively few promotional and administrative expenses.

When my colleagues and I designed the survey, we decided that the revenue questions were complicated and time-consuming enough. The survey included only a few questions about trends in the costs of touring (which are not reported in this Article). In the qualitative interviews and detailed financial case studies—the other parts of the larger Artists Revenue Streams Project, which are ongoing—my colleagues have asked more questions about the cost side. In future work, I hope to fill out that part of the picture, to help solidify the policy implications that can be drawn.

CONCLUSION

In this Article, I have described the results of a nationwide survey of more than 5,000 musicians in the United States. I have described the diversity of the musician population, the variety of their working situations, and the different roles they play as musicians. Musicians also vary in their mix of revenue sources. Some musicians rely more directly on copyright to earn revenue, whereas for others copyright is an indirect or an unrelated factor. Musicians' revenue sources are changing along with new technology. This highlights the importance of conducting the Money from Music Survey again in the future.

Resolving the causal questions about the incentive theory of copyright would require a true policy experiment to test how much creativity Congress can encourage by changing copyright law in particular ways. A single survey taking a snapshot of musicians' revenue streams at a particular point in time cannot do so. It can, however, provide important empirical context about what is happening in the music industry. Findings from the survey can also debunk certain theories or folk wisdom about how most musicians make money. These findings can also lay

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Spotify for paying different rates to major-label musicians and independent-label musicians).

the foundation for future theoretical and policy work in copyright law by offering facts about how musicians earn revenue.

At the time of this writing, my colleagues and I continue to work on other aspects of the Artists Revenue Streams Project.[130] We continue to analyze our Internet survey data, but we are also working on the qualitative interviews and the detailed financial case studies. In future work, we hope to combine the findings from all three phases of the project to create an even richer picture of musicians' working lives and the many ways that musicians earn revenue. The qualitative aspects of the project informed the design of our survey and have informed our conclusions based on the responses. We plan to use the qualitative studies to enhance our understanding of musicians within certain genres and subgroups that did not take the survey in large numbers. Despite the necessity of further research, we believe that this Article's empirical data can inform policymakers creating new copyright policies.

The survey findings are most consistent with a particular version of the incentive theory of copyright. Rather than providing marginal incentives to create for all musicians at all times, copyright law mostly affects the revenue of the highest-income musicians in a direct fashion. This is not a surprise, given the prevalence of winner-take-all markets in the entertainment industry. Other, more complicated microeconomic effects of copyright law on musicians, intermediaries, and their interactions, are certainly possible and not ruled out by the survey data. Nonetheless, the complicated structure of the musicians' labor market and the wide variety of musicians' working situations and other attributes, as described in the survey data, should inform copyright policy in the future.

130. My colleagues and I have posted a number of interesting analyses on the project website: http://money.futureofmusic.org.

Table 1: Number of Respondents Completing the Survey up to Particular Stages

Survey Question Numbers	Broad Grouping of Questions	Description of Questions' Content	Completed This Stage	Stopped at This Stage
1–3	Core Questions	Eligibility: Consent, citizenship, and age	6,769	626
4–11		Labor-market outcomes and organizational memberships	6,223	546
12		Revenue allocation across large categories	5,371	852
13–18		Detailed revenue questions, income, and genre	5,129	242
19–107	Role Questions	Medium version: Asked for details about one role only	676	14
108–191		Long version: Asked for details about all roles played	1,796	90
192–193		Short version: Asked only which roles played	2,535	18
—		*Subtotal: All versions*	*5,007*	*122*
194–202	Closing Questions	Media, technology, time use, and attitudes about them	4,851	156
203–210		Demographic questions: gender, ethnicity, education	4,828	23
211		ZIP code	4,652	176

Table 2: Response Rates, by Music Organization

Music Organization	Approximate Membership	Number of Respondents in Survey Sample	Response Rate
Broadcast Music, Inc. (BMI)	500,000	907	0.2%
American Society of Composers, Authors, and Publishers (ASCAP)	427,000	1,024	0.2%
Screen Actors Guild (SAG)	120,000	110	0.1%
American Federation of Musicians (AFM)	90,000	2,615	2.9%
American Federation of Television and Radio Artists (AFTRA)	70,000	160	0.2%
Just Plain Folks	51,500	109	0.2%
SoundExchange	45,619	348	0.8%
All About Jazz	35,217	201	0.6%
Fractured Atlas	20,180	58	0.3%
National Academy of Recording Artists and Sciences (NARAS)	13,000	298	2.3%
American Guild of Musical Artists (AGMA)	8,000	31	0.4%
Chamber Music America	8,000	244	3.1%
Country Music Association	6,000	29	0.5%
Songwriters Guild	5,000	31	0.6%
Nashville Songwriters Association International	5,000	54	1.1%
Gospel Music Association	4,000	17	0.4%
Early Music America	3,000	65	2.2%
Folk Alliance	2,800	99	3.5%
American Music Center	2,500	159	6.4%
International Bluegrass Music Association	2,300	32	1.4%
Jazz Education Network	2,238	176	7.9%
American Composers Forum	2,000	246	12.3%
Association of Performing Arts Presenters (APAP)	1,400	34	2.4%

Note: The performing rights organization SESAC does not publicize its number of members. Within the survey, 71 respondents were members of SESAC.

Table 3: Basic Demographics of Survey Respondents

Variable	Subgroup	Number	Percent
Age	18 to 29	955	17.8%
	30 to 39	1,148	21.4%
	40 to 49	974	18.1%
	50 to 59	1,360	25.3%
	60 to 69	723	13.5%
	70 or older	211	3.9%
Gender	Female	1,451	30.2%
	Male	3,349	69.6%
	Transgender	10	0.2%
Race and Ethnicity	White/Caucasian	4,190	87.6%
	Black/African American	156	3.3%
	Hispanic or Latino	104	2.2%
	Asian	101	2.1%
	American Indian or Alaska Native	15	0.3%
	Pacific Islander	9	0.2%
	Multiracial	108	2.3%
	Other	99	2.1%
Education: Highest Degree Completed	Some high school	27	0.6%
	High school graduate	121	2.5%
	Some college	831	17.2%
	College graduate	1,404	29.0%
	Some graduate work	769	15.9%
	Graduate degree	1,689	34.9%
Music School	Classical	1,359	79.2%
	All other genres	1,369	46.2%
Music Degree	Classical	1,515	88.3%
	All other genres	1,331	45.0%

Gross Income (Music and Non-Music)	$200,000 or More	99	1.8%
	$140,000 to $199,999	138	2.6%
	$100,000 to $139,999	347	6.5%
	$60,000 to $99,999	1,049	19.5%
	$40,000 to $59,999	1,053	19.6%
	$20,000 to $39,999	1,350	25.1%
	Less than $20,000	1,006	18.7%
	Missing, don't know, or decline	329	6.1%
Hours Spent on Music	45 or more hours per week	1,119	20.8%
	31 to 45 hours per week	1,303	24.3%
	16 to 30 hours per week	1,466	27.3%
	0 to 15 hours per week	1,483	27.6%
Share of Income from Music	100%	2,262	42.1%
	75% to 95%	570	10.6%
	50 to 70%	346	6.4%
	25% to 45%	328	6.1%
	5% to 20%	1,293	24.1%
	0%, Missing, or don't know	572	10.7%

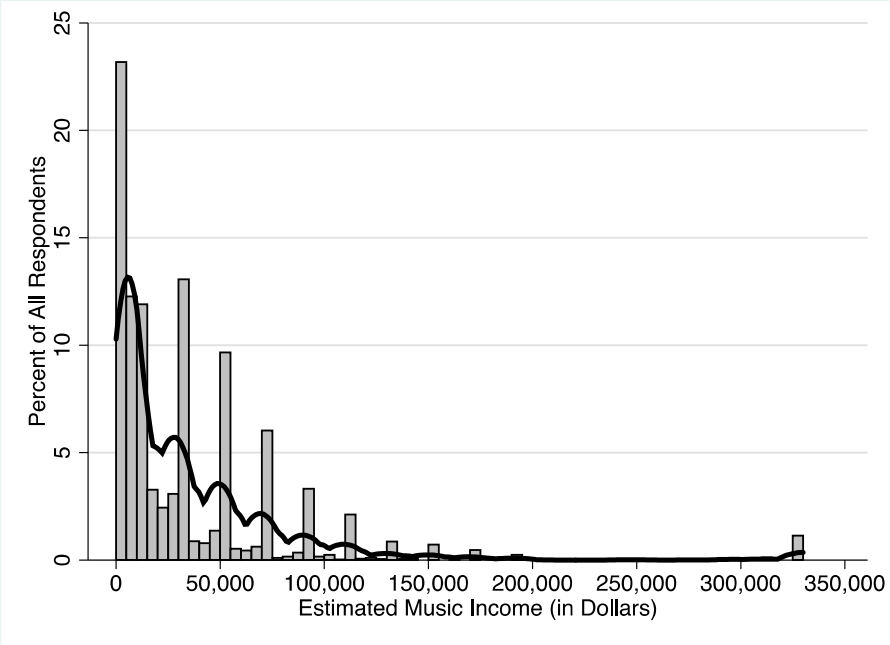
Table 4: Musical Genres

Genre	Primary	Percent	Secondary	Percent	Tertiary	Percent
Classical	1,863	34.7%	422	7.9%	236	4.4%
Jazz	872	16.2%	564	10.5%	296	5.5%
Rock/Alt-Rock	389	7.2%	379	7.1%	273	5.1%
Pop	242	4.5%	339	6.3%	229	4.3%
Composer	229	4.3%	167	3.1%	168	3.1%
Singer-Songwriter	189	3.5%	191	3.6%	207	3.9%
Folk	123	2.3%	182	3.4%	172	3.2%
Indie	118	2.2%	127	2.4%	113	2.1%
Americana	112	2.1%	133	2.5%	111	2.1%
Country	96	1.8%	92	1.7%	78	1.5%
Electronic	95	1.8%	105	2.0%	104	1.9%
Blues	89	1.7%	140	2.6%	116	2.2%
Broadway	87	1.6%	53	1.0%	44	0.8%
World	78	1.5%	148	2.8%	110	2.0%
Experimental	68	1.3%	142	2.6%	142	2.6%
Bluegrass	54	1.0%	42	0.8%	37	0.7%
Christian	53	1.0%	110	2.0%	68	1.3%
Avant-Garde	50	0.9%	121	2.3%	112	2.1%
R&B	48	0.9%	126	2.3%	101	1.9%
Rap/Hip-Hop	45	0.8%	38	0.7%	34	0.6%
Religious	44	0.8%	140	2.6%	82	1.5%
Punk	43	0.8%	36	0.7%	21	0.4%
Celtic	42	0.8%	41	0.8%	39	0.7%
Vernacular	38	0.7%	26	0.5%	33	0.6%
Children’s	34	0.6%	59	1.1%	41	0.8%
Gospel	28	0.5%	30	0.6%	28	0.5%
Soul	25	0.5%	28	0.5%	40	0.7%
Funk	23	0.4%	72	1.3%	75	1.4%

Metal	19	0.4%	23	0.4%	16	0.3%
DJ	16	0.3%	20	0.4%	28	0.5%
Reggae	12	0.2%	17	0.3%	17	0.3%
A Capella	10	0.2%	31	0.6%	29	0.5%
Hawaiian	3	0.1%	5	0.1%	3	0.1%
Not applicable	72	1.3%	159	3.0%	284	5.3%
Other/Did not list	62	1.2%	1,063	19.8%	1,884	35.1%

Note: The number of respondents for this table is the full sample of 5,371 respondents.

Figure 1: Distribution of Estimated Annual Music-Related Income



Notes: Number of observations = 5,013. Calculated based on respondents' total annual income (Question 16) and the percentage of that income they reported earning from music-related sources (Question 17).

Smoothed line is shown is the kernel density estimate based on the Epanechnikov kernel. Essentially, the kernel density takes the histogram, with discrete numbers, and estimates the underlying continuous distribution of respondents' music-related income.

Table 5: Music Income, by Genre—Size of the Groups for Analysis

Income Group	Estimated Dollar Range	Classical	Jazz	Composers	Rock, Pop, etc.	All Genres
1st percentile	$330,000	15	3	17	22	57 (1.1%)
2nd to 5th percentile	$110,000 to $313,500	110	33	21	90	254 (5.1%)
6th to 10th percentile	$85,500 to $105,000	100	26	9	67	202 (4.0%)
11th to 25th percentile	$50,000 to $85,000	432	134	33	281	880 (17.6%)
26th to 50th percentile	$18,000 to $49,500	467	226	44	402	1,139 (22.7%)
51st to 75th percentile	$5,000 to $17,500	428	225	59	607	1,319 (26.3%)
76th to 93rd percentile	$500 to $4,500	181	134	27	490	832 (16.6%)
94th to 100th percentile	$0	44	31	8	247	330 (6.6%)
All Income Groups		1,777 (35.5%)	812 (16.2%)	218 (4.4%)	2,206 (44.0%)	5,013 (100%)

Table 6: Organizational Variables, by Music Income Group and Genre

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.	All Genres
1st percentile	87% union 13% PRO 0.6 orgs 1.6 avg team	100% union 100% PRO 0.3 orgs 4.3 avg team	88% union 100% PRO 1.5 orgs 3.3 avg team	86% union 95% PRO 1.0 orgs 8.0 avg team	87% union 75% PRO 1.0 orgs 4.7 avg team
2nd to 5th percentile	91% union 17% PRO 0.5 orgs 1.7 avg team	79% union 64% PRO 1.3 orgs 3.1 avg team	86% union 100% PRO 1.4 orgs 2.8 avg team	79% union 71% PRO 0.7 orgs 5.5 avg team	85% union 49% PRO 0.7 orgs 3.4 avg team
6th to 10th percentile	89% union 10% PRO 0.6 orgs 1.9 avg team	65% union 58% PRO 1.3 orgs 2.4 avg team	56% union 89% PRO 2.3 orgs 2.7 avg team	67% union 58% PRO 0.9 orgs 4.0 avg team	77% union 36% PRO 0.8 orgs 2.7 avg team
11th to 25th percentile	81% union 15% PRO 0.6 orgs 1.7 avg team	67% union 59% PRO 1.1 orgs 3.1 avg team	42% union 97% PRO 1.8 orgs 3.5 avg team	59% union 61% PRO 0.7 orgs 4.2 avg team	71% union 39% PRO 0.8 orgs 2.8 avg team
26th to 50th percentile	81% union 13% PRO 0.5 orgs 1.3 avg team	50% union 56% PRO 0.9 orgs 3.3 avg team	45% union 82% PRO 1.9 orgs 2.9 avg team	39% union 59% PRO 0.4 orgs 4.4 avg team	59% union 41% PRO 0.6 orgs 2.9 avg team
51st to 75th percentile	68% union 10% PRO 0.4 orgs 1.3 avg team	51% union 35% PRO 0.6 orgs 2.6 avg team	14% union 83% PRO 1.4 orgs 2.3 avg team	27% union 53% PRO 0.4 orgs 4.1 avg team	43% union 37% PRO 0.5 orgs 2.9 avg team
76th to 93rd percentile	51% union 10% PRO 0.5 orgs 1.3 avg team	43% union 23% PRO 0.3 orgs 2.1 avg team	4% union 52% PRO 1.1 orgs 2.7 avg team	16% union 42% PRO 0.3 orgs 3.8 avg team	28% union 32% PRO 0.4 orgs 2.9 avg team
94th to 100th percentile	34% union 7% PRO 0.4 orgs 1.0 avg team	32% union 13% PRO 0.1 orgs 2.1 avg team	0% union 25% PRO 0.6 orgs 3.0 avg team	11% union 36% PRO 0.2 orgs 3.2 avg team	15% union 29% PRO 0.2 orgs 2.8 avg team
All Income Groups	75% union 12% PRO 0.5 orgs 1.5 avg team	53% union 44% PRO 0.8 orgs 2.8 avg team	37% union 82% PRO 1.5 orgs 2.8 avg team	33% union 52% PRO 0.4 orgs 4.1 avg team	51% union 38% PRO 0.6 orgs 2.9 avg team

Figure 2: Average Share of Music Income from Major Revenue Streams, All Respondents

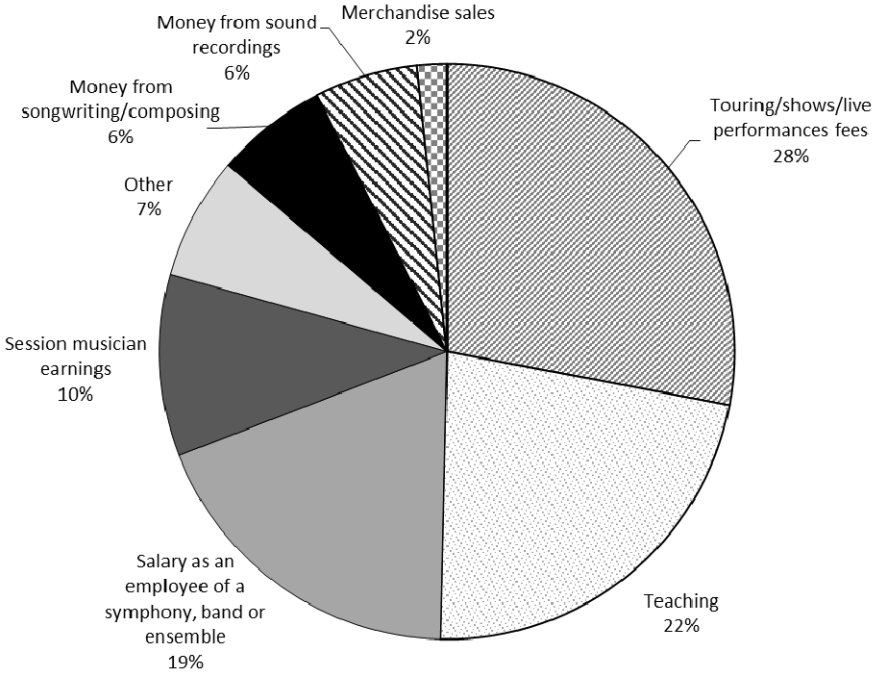


Figure 3: Average Share of Music Income from Major Revenue Streams, Categorized by Relation to Copyright Law, All Respondents

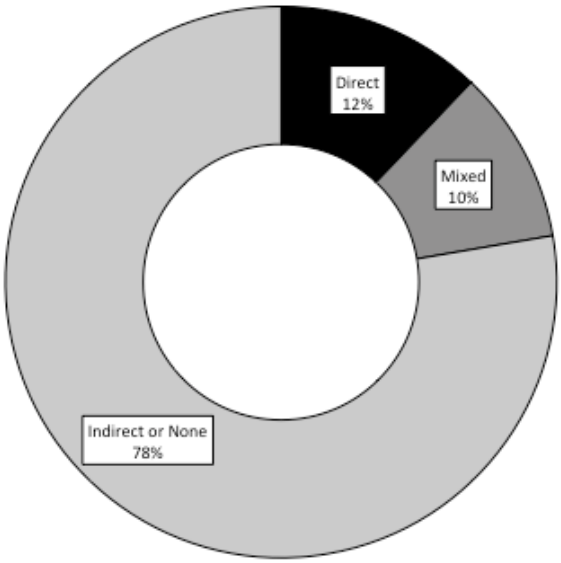


Figure 4: Average Share of Music Income from Major Revenue Streams, by Income Group

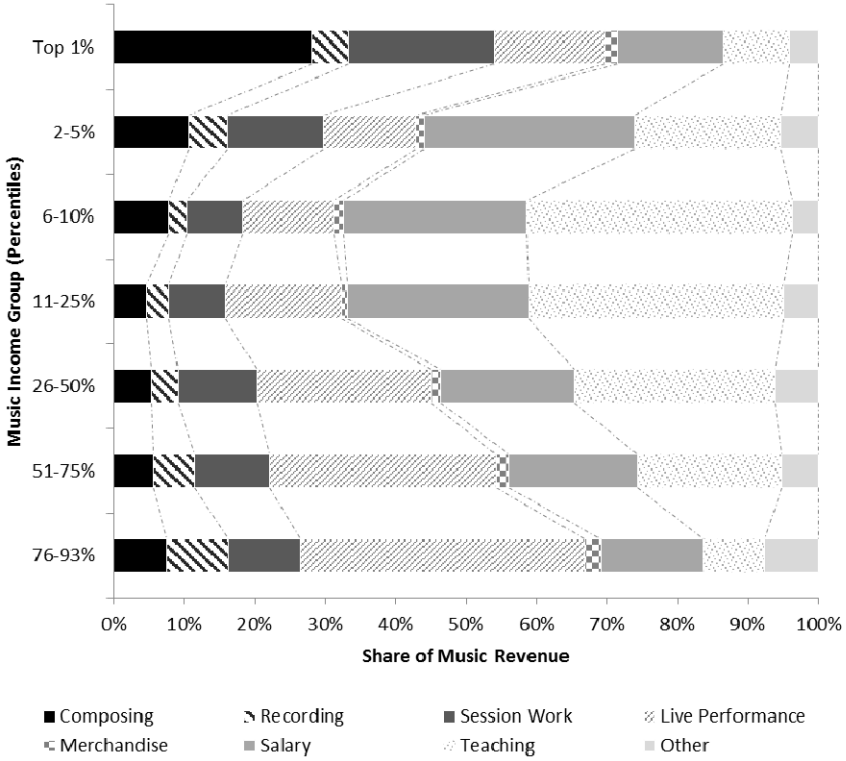


Figure 5: Average Share of Music Income from Major Revenue Sources, by Genre

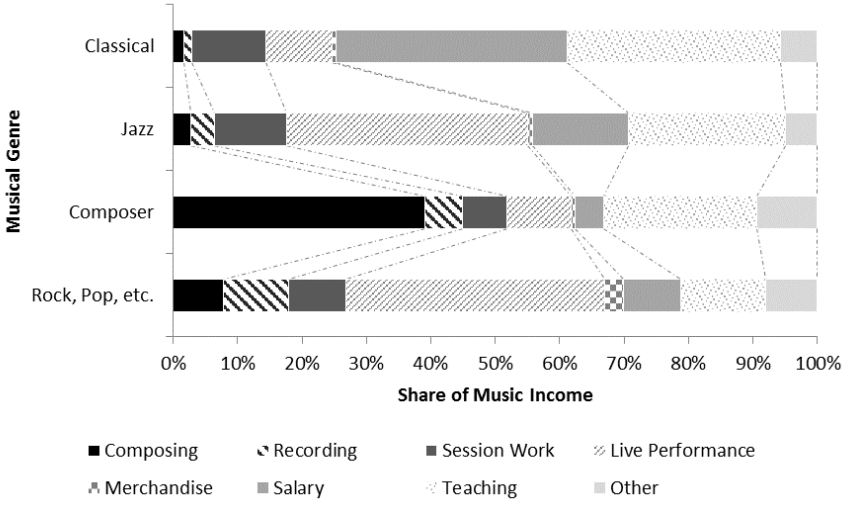
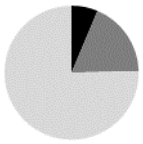
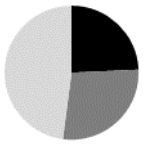
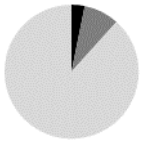
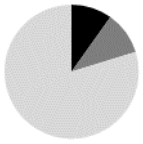
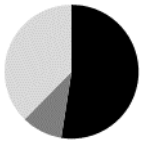
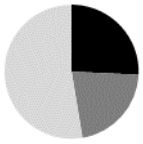
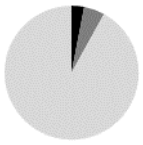
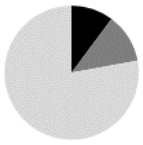
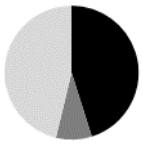
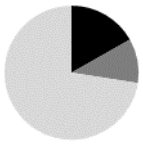
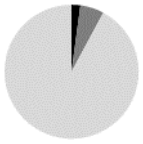
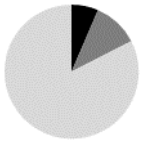
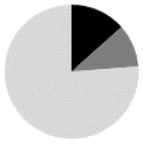
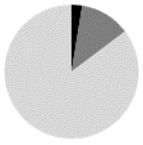
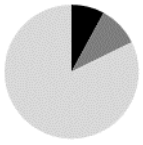
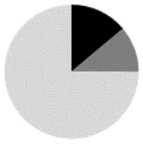
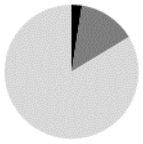
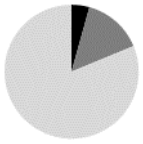
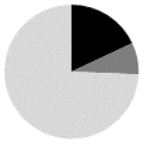
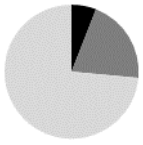
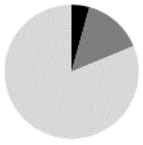


Table 7: Copyright-Related Income, by Income Group and Musical Genre

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.
1st percentile				
2nd to 5th percentile				
6th to 10th percentile				
11th to 25th percentile				
26th to 50th percentile				
51st to 75th percentile				
76th to 93rd percentile				

The 94th through 100th percentiles of the music-income distribution are left out in this table because those respondents have no music income.

Key:

- Black is income directly related to copyright (compositions and recordings).
- Medium Gray is income that may relate to copyright protection (session work, which can be for recordings or live performances).
- Light Gray is income with at most an indirect relationship to copyright (live performance, salary from an orchestra or band, teaching, merchandise, other).

Figure 6: Average Dollars from Major Revenue Sources, All Respondents

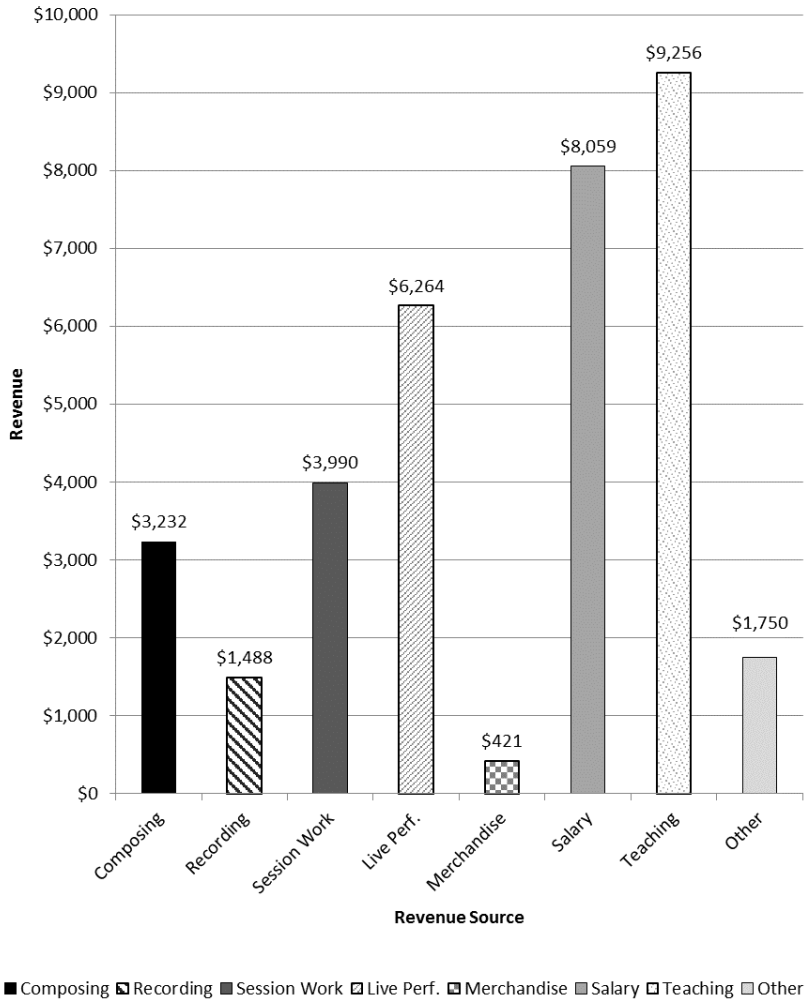


Figure 7: Average Dollars from Major Revenue Sources, by Genre

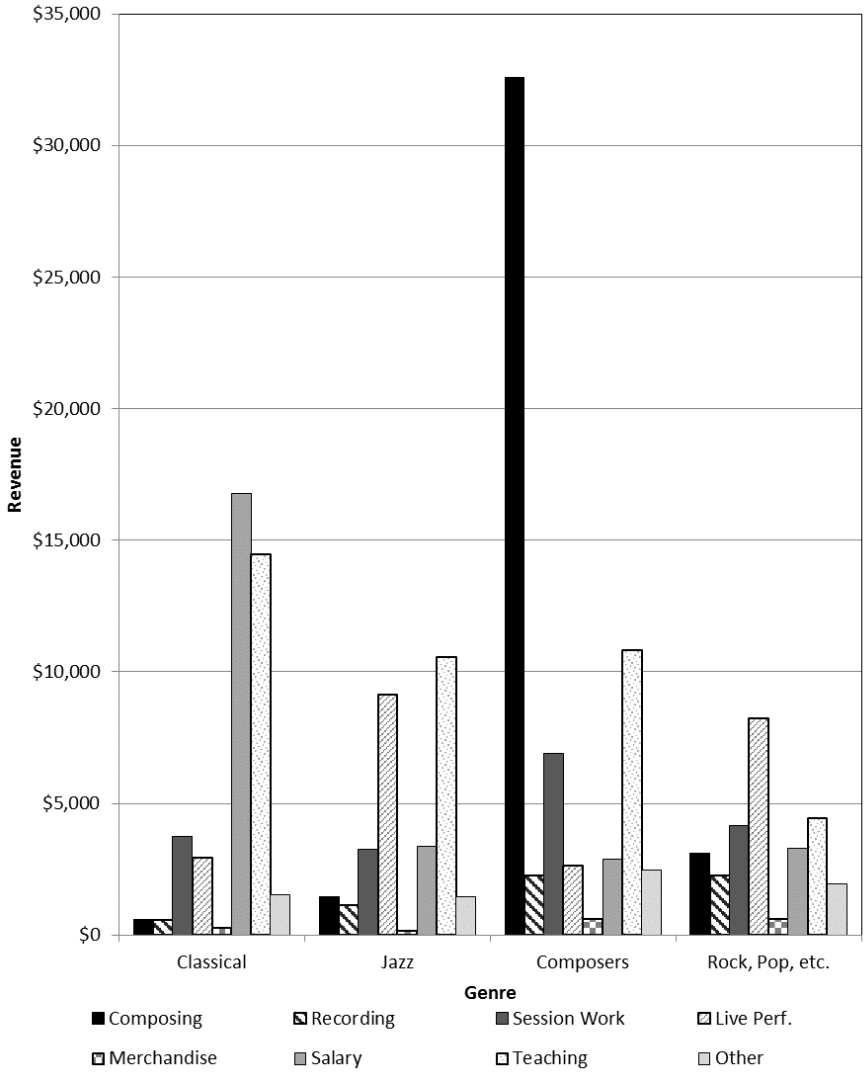


Table 8: Reported Changes in Major Revenue Streams over the Past Five Years

Major Revenue Stream	Increased	Same	Decreased	Don't Know	Not Applicable*
Teaching	30.4%	18.8%	16.7%	0.8%	33.3%
Touring/shows/live performances fees	27.2%	20.2%	27.9%	1.2%	23.5%
Session musician earnings	17.2%	20.0%	25.2%	1.6%	36.0%
Money from sound recordings	15.7%	18.4%	21.8%	2.6%	41.5%
Salary as employee of symphony, band or ensemble	15.6%	16.7%	20.2%	1.2%	46.3%
Money from songwriting/ composing	14.7%	16.5%	10.8%	1.8%	56.2%
Merchandise sales	7.0%	11.3%	7.5%	1.5%	72.7%
Other †	—	—	—	—	—

* The "Not Applicable" category indicates percentage respondents who have not earned revenue from a particular revenue stream over the past five years.

† The survey did not ask about perceived changes in the "Other" category, since it is potentially made up of dozens of diverse revenue streams.

Table 9: Reported Changes in Copyright-Related Revenue—Compositions

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.
1st percentile	11% inc. 33% same 0% dec. [56% n/a]	0% inc. 0% same 100% dec. [0% n/a]	59% inc. 18% same 24% dec. [0% n/a]	40% inc. 25% same 20% dec. [15% n/a]
2nd to 5th percentile	14% inc. 5% same 5% dec. [77% n/a]	28% inc. 24% same 21% dec. [28% n/a]	48% inc. 33% same 14% dec. [5% n/a]	32% inc. 16% same 20% dec. [33% n/a]
6th to 10th percentile	7% inc. 8% same 8% dec. [76% n/a]	13% inc. 39% same 9% dec. [39% n/a]	44% inc. 22% same 33% dec. [0% n/a]	22% inc. 25% same 16% dec. [37% n/a]
11th to 25th percentile	8% inc. 8% same 4% dec. [80% n/a]	19% inc. 25% same 15% dec. [41% n/a]	42% inc. 24% same 24% dec. [9% n/a]	19% inc. 19% same 21% dec. [41% n/a]
26th to 50th percentile	6% inc. 8% same 3% dec. [84% n/a]	13% inc. 22% same 17% dec. [48% n/a]	52% inc. 30% same 16% dec. [2% n/a]	25% inc. 21% same 15% dec. [39% n/a]
51st to 75th percentile	4% inc. 5% same 4% dec. [88% n/a]	6% inc. 18% same 12% dec. [63% n/a]	54% inc. 25% same 14% dec. [7% n/a]	17% inc. 19% same 14% dec. [49% n/a]
76th to 93rd percentile	6% inc. 10% same 6% dec. [78% n/a]	10% inc. 15% same 1% dec. [74% n/a]	44% inc. 30% same 19% dec. [7% n/a]	12% inc. 22% same 12% dec. [54% n/a]

Note: Shaded box indicates that a greater number of respondents reported increases in the revenue stream than reported increases.

The 94th through 100th percentiles of the music-income distribution are left out in this table because those respondents have no music income.

Table 10: Reported Changes in Copyright-Related Revenue—Sound Recordings

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.
1st percentile	10% inc. 20% same 20% dec. [50% n/a]	0% inc. 0% same 67% dec. [33% n/a]	33% inc. 13% same 27% dec. [27% n/a]	47% inc. 32% same 21% dec. [0% n/a]
2nd to 5th percentile	9% inc. 22% same 43% dec. [25% n/a]	14% inc. 21% same 39% dec. [25% n/a]	17% inc. 28% same 33% dec. [22% n/a]	31% inc. 18% same 31% dec. [19% n/a]
6th to 10th percentile	12% inc. 23% same 26% dec. [38% n/a]	14% inc. 41% same 23% dec. [23% n/a]	25% inc. 25% same 38% dec. [13% n/a]	12% inc. 31% same 26% dec. [31% n/a]
11th to 25th percentile	9% inc. 15% same 23% dec. [53% n/a]	16% inc. 30% same 29% dec. [25% n/a]	21% inc. 21% same 25% dec. [32% n/a]	17% inc. 17% same 29% dec. [37% n/a]
26th to 50th percentile	7% inc. 15% same 16% dec. [63% n/a]	16% inc. 21% same 33% dec. [30% n/a]	13% inc. 25% same 25% dec. [38% n/a]	24% inc. 24% same 24% dec. [28% n/a]
51st to 75th percentile	5% inc. 5% same 11% dec. [79% n/a]	10% inc. 17% same 22% dec. [51% n/a]	14% inc. 22% same 22% dec. [42% n/a]	26% inc. 19% same 24% dec. [30% n/a]
76th to 93rd percentile	4% inc. 10% same 5% dec. [81% n/a]	13% inc. 15% same 13% dec. [59% n/a]	8% inc. 29% same 21% dec. [42% n/a]	22% inc. 21% same 22% dec. [36% n/a]

Note: Shaded box indicates that a greater number of respondents reported increases in the revenue stream than reported increases.

The 94th through 100th percentiles of the music-income distribution are left out in this table because those respondents have no music income.

Figure 8: Trends in Specific Revenue Streams, All Respondents

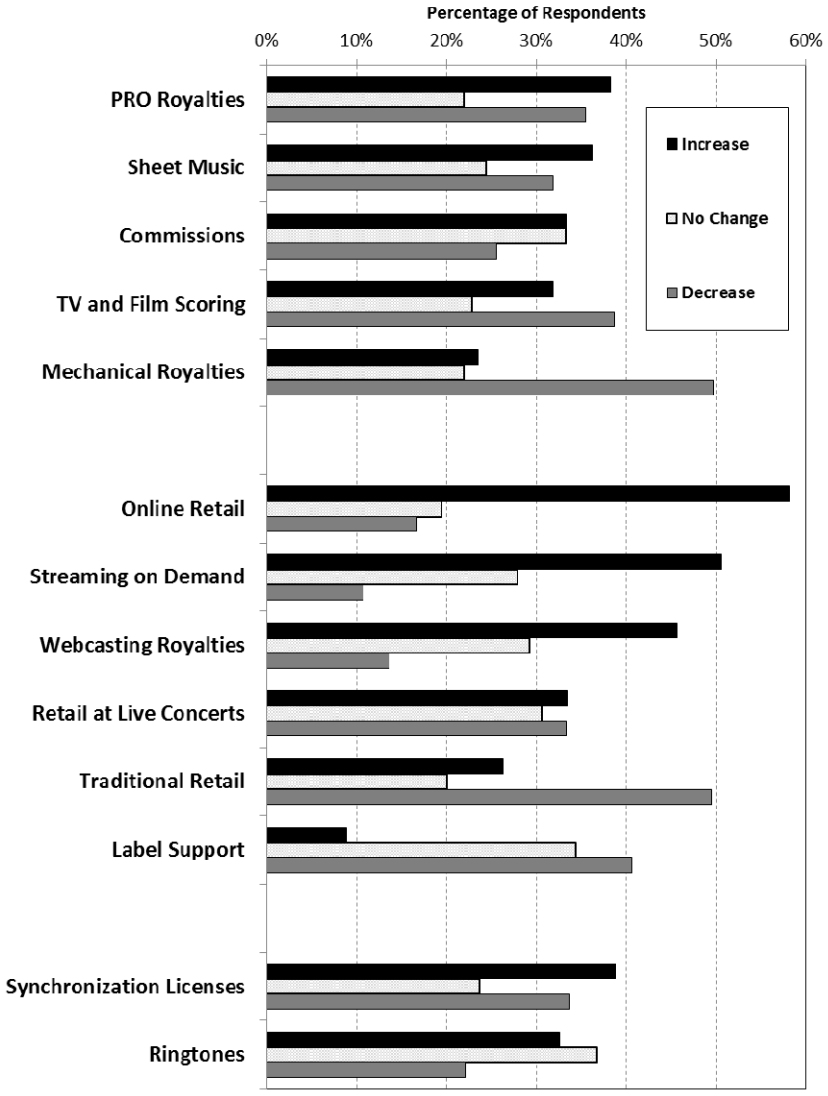


Table 11: Use of Internet Technology in Music-Related Work

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.
1st percentile	Web use: 2.0/4 Services used: 1.1	Web use: 1.9/4 Services used: 1.7	Web use: 3.1/4 Services used: 2.5	Web use: 3.0/4 Services used: 3.6
2nd to 5th percentile	Web use: 2.0/4 Services used: 1.1	Web use: 2.8/4 Services used: 2.2	Web use: 2.8/4 Services used: 2.9	Web use: 2.9/4 Services used: 3.3
6th to 10th percentile	Web use: 2.3/4 Services used: 1.3	Web use: 3.0/4 Services used: 3.1	Web use: 3.2/4 Services used: 2.2	Web use: 2.6/4 Services used: 3.3
11th to 25th percentile	Web use: 2.2/4 Services used: 1.4	Web use: 2.9/4 Services used: 3.2	Web use: 3.0/4 Services used: 3.8	Web use: 2.9/4 Services used: 3.4
26th to 50th percentile	Web use: 2.2/4 Services used: 1.4	Web use: 3.0/4 Services used: 3.9	Web use: 3.0/4 Services used: 3.8	Web use: 3.1/4 Services used: 4.4
51st to 75th percentile	Web use: 2.2/4 Services used: 1.3	Web use: 2.7/4 Services used: 3.0	Web use: 3.0/4 Services used: 3.6	Web use: 3.0/4 Services used: 4.6
76th to 93rd percentile	Web use: 2.1/4 Services used: 1.1	Web use: 2.5/4 Services used: 2.1	Web use: 2.9/4 Services used: 3.7	Web use: 3.0/4 Services used: 4.5
94th to 100th percentile	Web use: 1.7/4 Services used: 0.7	Web use: 2.3/4 Services used: 1.9	Web use: 3.0/4 Services used: 3.3	Web use: 2.9/4 Services used: 4.0

Figure 9: Perceptions of the Internet's Effect on Respondents' Careers over the Past Five Years

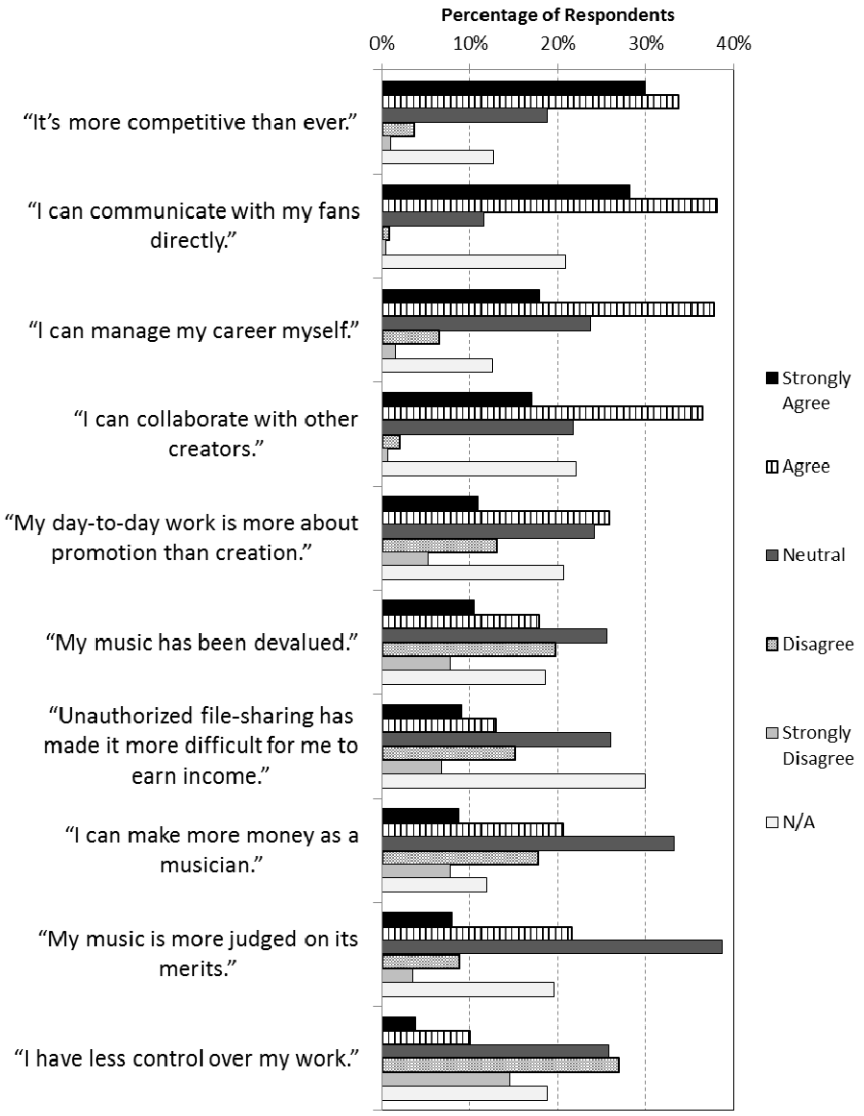


Table 12: Composite of Attitudes Toward Internet's Effect on Career in Music

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.
1st percentile	+1.1	–4.0	+0.6	+1.3
2nd to 5th percentile	–0.6	+1.9	+0.9	+1.6
6th to 10th percentile	+1.0	+1.7	+2.4	+2.4
11th to 25th percentile	+1.5	+2.0	+1.8	+2.3
26th to 50th percentile	+1.9	+1.5	+0.7	+2.3
51st to 75th percentile	+1.7	+1.5	+2.8	+2.1
76th to 93rd percentile	+1.9	+1.9	+1.7	+2.4
94th to 100th percentile	+1.1	+2.2	+3.1	+2.5

Appendix A: Basic Demographics, by Music Income Group and Genre

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.	All Genres
1st percentile	Avg age 52 87% male 79% white	Avg age 55 100% male 100% white	Avg age 51 94% male 100% white	Avg age 53 90% male 86% white	Avg age 52 91% male 89% white
2nd to 5th percentile	Avg age 51 73% male 89% white	Avg age 55 94% male 81% white	Avg age 51 90% male 95% white	Avg age 49 84% male 85% white	Avg age 51 81% male 87% white
6th to 10th percentile	Avg age 50 67% male 92% white	Avg age 51 100% male 92% white	Avg age 52 75% male 88% white	Avg age 49 80% male 88% white	Avg age 50 76% male 90% white
11th to 25th percentile	Avg age 46 52% male 93% white	Avg age 47 90% male 88% white	Avg age 45 81% male 84% white	Avg age 45 79% male 88% white	Avg age 46 67% male 91% white
26th to 50th percentile	Avg age 43 43% male 91% white	Avg age 47 86% male 89% white	Avg age 44 72% male 79% white	Avg age 44 80% male 88% white	Avg age 44 65% male 89% white
51st to 75th percentile	Avg age 44 41% male 92% white	Avg age 48 87% male 85% white	Avg age 40 69% male 87% white	Avg age 44 78% male 84% white	Avg age 44 67% male 87% white
76th to 93rd percentile	Avg age 47 47% male 90% white	Avg age 53 83% male 84% white	Avg age 40 87% male 91% white	Avg age 42 77% male 84% white	Avg age 45 72% male 86% white
94th to 100th percentile	Avg age 53 56% male 92% white	Avg age 54 86% male 86% white	Avg age 44 100% male 100% white	Avg age 42 82% male 83% white	Avg age 45 79% male 85% white
All Income Groups	Avg age 46 49% male 92% white	Avg age 49 87% male 86% white	Avg age 44 79% male 88% white	Avg age 44 79% male 85% white	Avg age 45 70% male 88% white

Appendix B: Education Level, by Music Income Group and Genre

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.	All Genres
1st percentile	93% college 40% grad sch 79% music	50% college 0% grad sch 100% music	81% college 38% grad sch 73% music	48% college 10% grad sch 52% music	70% college 26% grad sch 67% music
2nd to 5th percentile	89% college 45% grad sch 88% music	75% college 28% grad sch 73% music	85% college 55% grad sch 89% music	63% college 18% grad sch 53% music	78% college 34% grad sch 74% music
6th to 10th percentile	97% college 61% grad sch 84% music	84% college 52% grad sch 80% music	75% college 50% grad sch 75% music	78% college 35% grad sch 64% music	88% college 51% grad sch 76% music
11th to 25th percentile	97% college 69% grad sch 85% music	82% college 36% grad sch 75% music	84% college 58% grad sch 63% music	75% college 23% grad sch 56% music	87% college 49% grad sch 74% music
26th to 50th percentile	96% college 60% grad sch 83% music	75% college 26% grad sch 67% music	98% college 38% grad sch 75% music	73% college 16% grad sch 46% music	84% college 37% grad sch 67% music
51st to 75th percentile	93% college 52% grad sch 77% music	78% college 30% grad sch 61% music	85% college 38% grad sch 69% music	67% college 17% grad sch 38% music	78% college 32% grad sch 57% music
76th to 93rd percentile	89% college 48% grad sch 64% music	77% college 26% grad sch 45% music	74% college 22% grad sch 65% music	64% college 15% grad sch 25% music	72% college 24% grad sch 39% music
94th to 100th percentile	93% college 59% grad sch 49% music	83% college 52% grad sch 31% music	88% college 13% grad sch 29% music	70% college 19% grad sch 13% music	75% college 28% grad sch 21% music
Total	94% college 58% grad sch 79% music	78% college 31% grad sch 63% music	86% college 40% grad sch 70% music	69% college 18% grad sch 38% music	80% college 35% grad sch 59% music

Appendix C: Full Time Work, Hours Spent on Music, and Share of Income from Music, by Music Income Group and Genre

Income Group	Classical	Jazz	Composers	Rock, Pop, etc.	All Genres
1st percentile	73% FT 45.0 hrs 100% of $ from music	67% FT 38.0 hrs 100% of $ from music	94% FT 49.5 hrs 100% of $ from music	64% FT 40.7 hrs 100% of $ from music	75% FT 44.3 hrs 100% of $ from music
2nd to 5th percentile	62% FT 40.1 hrs 99% of $ from music	73% FT 42.1 hrs 99% of $ from music	81% FT 43.5 hrs 96% of $ from music	72% FT 42.7 hrs 98% of $ from music	69% FT 41.6 hrs 98% of $ from music
6th to 10th percentile	68% FT 40.9 hrs 98% of $ from music	73% FT 42.8 hrs 98% of $ from music	89% FT 49.1 hrs 98% of $ from music	72% FT 42.9 hrs 97% of $ from music	71% FT 42.1 hrs 97% of $ from music
11th to 25th percentile	67% FT 40.2 hrs 97% of $ from music	72% FT 42.5 hrs 98% of $ from music	82% FT 48.0 hrs 94% of $ from music	71% FT 42.5 hrs 97% of $ from music	70% FT 41.6 hrs 97% of $ from music
26th to 50th percentile	39% FT 33.4 hrs 87% of $ from music	49% FT 37.8 hrs 83% of $ from music	52% FT 41.4 hrs 80% of $ from music	43% FT 34.2 hrs 83% of $ from music	43% FT 34.9 hrs 85% of $ from music
51st to 75th percentile	18% FT 23.3 hrs 58% of $ from music	20% FT 25.5 hrs 51% of $ from music	32% FT 34.3 hrs 67% of $ from music	17% FT 25.8 hrs 52% of $ from music	18% FT 25.3 hrs 54% of $ from music
76th to 93rd percentile	0% FT 14.9 hrs 10% of $ from music	0% FT 14.9 hrs 9% of $ from music	0% FT 19.5 hrs 7% of $ from music	0% FT 15.2 hrs 10% of $ from music	0% FT 15.2 hrs 10% of $ from music
94th to 100th percentile	0% FT 10.9 hrs 0% of $ from music	0% FT 9.4 hrs 0% of $ from music	0% FT 13.6 hrs 0% of $ from music	0% FT 11.5 hrs 0% of $ from music	0% FT 11.3 hrs 0% of $ from music
All Income Groups	39% FT 31.1 hrs 74% of $ from music	36% FT 30.6 hrs 62% of $ from music	50% FT 37.9 hrs 70% of $ from music	27% FT 26.9 hrs 52% of $ from music	34% FT 29.5 hrs 62% of $ from music

Appendix D: Revenue Streams in the "Other" Category, by Number of Respondents Indicating Revenue from that Source

Revenue Stream within the "Other" Category	Relevant Population	Number in Relevant Population	Number Reporting Revenue Stream	Percentage of Relevant Population
Producing	All	5,371	626	11.7%
Sound Recording Special Payments Fund	AFM	2,615	616	23.6%
Honoraria	All	5,371	580	10.8%
Grants	All	5,371	545	10.1%
Film Musicians Secondary Markets Fund	AFM	2,615	431	16.5%
Fan Funding (Through Intermediary)	All	5,371	274	5.1%
Corporate Sponsorship	All	5,371	215	4.0%
Intellectual Property Rights Distribution Fund	AFM & AFTRA	2,651	192	7.2%
ASCAPLUS Program	ASCAP	1,024	180	17.6%
Acting	All	5,371	162	3.0%
Website Advertising	All	5,371	142	2.6%
Alliance of Artists and Recording Companies	Recording Artists	2,200	125	5.7%
Product Endorsements	All	5,371	121	2.3%
Litigation Settlements from Label or Publisher	Those With Label or Publishing Deal	1,660	112	6.7%
Sample Licensing	Recording Artists & Composers	3,054	110	3.6%
Publishing Advance	Composers	2,660	100	3.8%

YouTube Advertising Revenue Sharing	Recording Artists & Composers	3,053	72	2.4%
Licensing of Name or Likeness	All	5,371	49	0.9%
Fan Club (Direct Subscriptions)	All	5,371	39	0.7%
AFTRA Contingent Scale Payments	AFTRA	160	13	8.1%

Appendix E: Reasons for Increases in Specific Revenue Streams Based on Sound Recordings

Specific Revenue Stream	Reason for Increase	Number	Percentage of Those Reporting an Increase
Online Retail (376 respondents reported an increase)	Shift to digital purchases	255	67.8%
	More releases in general	229	60.9%
	More outlets/platforms	217	57.7%
	Career growth	198	52.7%
	More releases digitized	171	45.5%
	Fewer middlemen	128	34.0%
	Higher price	11	2.9%
	Other	5	1.3%
On-Demand Streaming (183 respondents reported an increase)	More outlets/platforms	140	76.5%
	More releases in general	103	56.3%
	Shift: downloads to streams	99	54.1%
	More releases digitized	98	53.6%
	Career growth	90	49.2%
	Better royalty rate	15	8.2%
SoundExchange Webcast Royalties (64 respondents reported an increase)	Registered with Sound Exch.	41	64.1%
	More plays	36	56.3%
	More recordings released	31	48.4%
	More platforms/outlets	30	46.9%
	More effective collection	28	43.8%
	Career growth	28	43.8%
	Other	2	3.1%

Appendix F: Reasons for Decreases in Specific Revenue Streams Based on Compositions or Sound Recordings

Specific Revenue Stream	Reason for Decrease	Number	Percentage of Those Reporting a Decrease
Mechanical Royalties (179 respondents reported a decrease)	Lower sales of recordings	114	63.7%
	Fewer customers in general	84	46.9%
	Fewer active songs	79	44.1%
	No publishing deal	35	19.6%
	Career changes	33	18.4%
	Fewer platforms/outlets	32	17.9%
	Shift from albums to singles	26	14.5%
	Other	20	11.2%
Financial Support from Record Label (160 respondents reported a decrease)	Label reductions	88	55.0%
	Switched to self-releases	59	36.9%
	Earning less money	55	34.4%
	Became a lower priority	54	33.8%
	Became less active	51	31.9%
	Switched to another label	24	15.0%
	Dropped by former label	21	13.1%
	Other	16	10.0%
Brick-and-Mortar Retail (382 respondents reported a decrease)	Lower demand	292	76.4%
	Fewer stores	170	44.5%
	Fewer active releases	132	34.6%
	Some recordings out of print	112	29.3%
	Lower price	105	27.5%
	Career changes	87	22.8%
	More middlemen	37	9.7%
	Other	34	8.9%