Economic growth and the quality of music

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Abstract: Why were some years, such as 1995, so fertile for great music? Do economic conditions affect the quality of music? In this paper I find a robust positive relationship between GDP growth and the quantity of acclaimed albums in a given year. I discuss some of the possible mechanisms behind this relationship.

Introduction

It is often claimed that the genius of Nirvana and the grunge movement that followed emerged out of economically difficult times. But do hard times really beget amazing records? In recent research, Pettijohn and Sacco Jr (2009) argue that when social and economic times are relatively threatening, song lyrics are more meaningful in content. But does that mean the songs are better?

In this paper I try to answer this question empirically by regressing music quality in a given year on GDP growth. I measure the greatness of music in each year by the share of amazing albums that came out that year, i.e. the share among the 1000 best albums of all time according to Acclaimed Music, a music critics' aggregator. Quite counter-intuitively, in periods of higher GDP growth, I find music to be of significantly better quality.

Data

I put together a dataset of high-quality albums derived from Acclaimed Music to measure which years were the best for music. In the words of Waldfogel (2011), Acclaimed Music is "a site operated by a Swedish statistician who synthesizes over 100 different professional music critics' rankings to produce overall rankings of the top 3000 albums of all time". I focused on the top 1000 albums, to focus on top quality. I then match a nationality to each album using Google searches when necessary. The ten best albums of all time are given in table 1.

Table 1. The ten best albums of all time

Artist	Album	Year	Rank	Country
The Beach Boys	Pet Sounds	1966	1	US
The Beatles	Revolver	1966	2	UK
Nirvana	Nevermind	1991	3	US
The Velvet Underground & Nico	The Velvet Underground & Nico	1967	4	US
The Beatles	Sgt. Pepper's Lonely Hearts Club Band	1967	5	UK
Marvin Gaye	What's Going On	1971	6	US
Bob Dylan	Blonde on Blonde	1966	7	US
The Rolling Stones	Exile on Main St.	1972	8	UK
The Clash	London Calling	1979	9	UK
Sex Pistols	Never Mind the Bollocks - Here's the Sex Pistols	1977	10	UK

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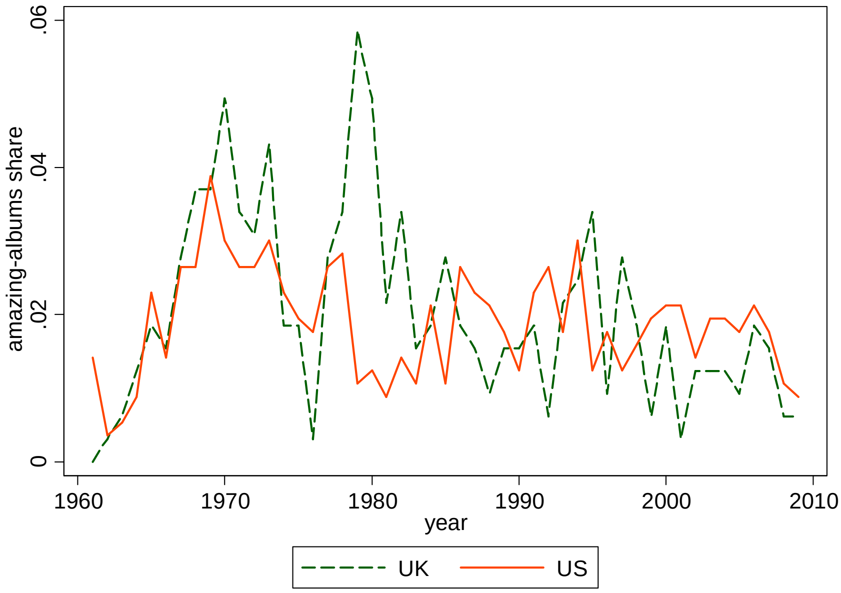
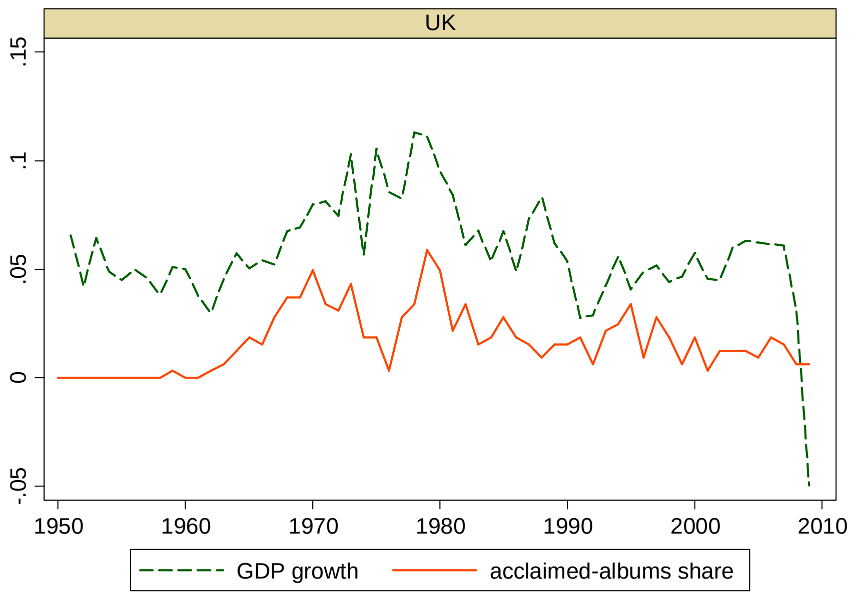
Most albums are from the US (56.7%) and the UK (32.4%). Hence I focus on these two countries in my empirical analysis. The US and UK music-quality cycles are somewhat similar (figure 1). The most amazing years were between 1967 and 1971, though the UK also peaked at the end of the 70s.

Figure 1. The US and UK music cycles



To measure economic conditions I use data on real GDP growth from the Penn world Table. Figure 2 suggests growth and music quality move together in the UK. I test for this more rigorously in the next section.

Figure 2. GDP growth and music quality in the UK



Empirical analysis

I regress music quality on contemporaneous and one-year lagged, and 5-year-moving-average smoothed real GDP growth separately for the US and the UK (table 2)[2]. I find that music is of better quality in years of high GDP growth, and that this relationship seems to be especially strong for the UK.

Table 2. **The effect of GDP growth on the quality of music in the UK and the US**

	UK			US		
	(1)	(2)	(3)	(4)	(5)	(6)
GDP growth	0.319***			0.0536		
	(0.0982)			(0.0401)		
lagged GDP growth		0.376***			0.0552	
		(0.103)			(0.0497)	
5-year moving average			0.451***			0.0809**
			(0.0607)			(0.0369)
Observations	59	58	60	59	58	60
R-squared	0.298	0.279	0.471	0.038	0.035	0.059

Dependant variable is share of amazing albums. In columns 4-6 explaining variables are lagged by one-year. Robust standard errors in parentheses, *** p<0.01, ** p<0.05.

Underlying mechanisms

The increase in income associated with growth may lead people to consume more recorded music and go to more concerts, which are the main source of income for music groups (above 90% according to Connolly and Krueger (2006)). This raises the expected revenues of a recording artist and triggers an avalanche of start-up bands which in turn increases the probability of amazing records. Vaubel (2005) explains how, in the same way, a demand increase from European princes raised the income and prestige of suppliers and led to the rise of Baroque and Renaissance Music (Vaubel 2005). Still it's not totally clear how artists respond to expected income as many do art for art's sake. But as Caves (2003) argues, artists need humdrum inputs, such as producers and record labels, which respond to economic incentives even when artists do art for art's sake. Higher GDP growth may translate into higher resources for producers who take more risk and invest in innovative bands which turn out to be world-shattering.

Robustness checks

An alternative story is that the incredible music years at the end of the 60s were the result of demographics, i.e. the baby boom. Indeed, the share of teenagers and young adults boomed during the sixties (figure 3), and this may be behind the increased demand for innovative music. To test for this I add as an explaining variable the share of the population between 18

[2] I also run a country-fixed effects model with 2-way clustered standard errors. I find a positive and significant effect around 0.16.

and 24. While demographics seem to explain the 1970 peak, it does not explain the post-1970 yearly variations that are associated with GDP growth (table 3).

Figure 3. Music quality and the baby boom

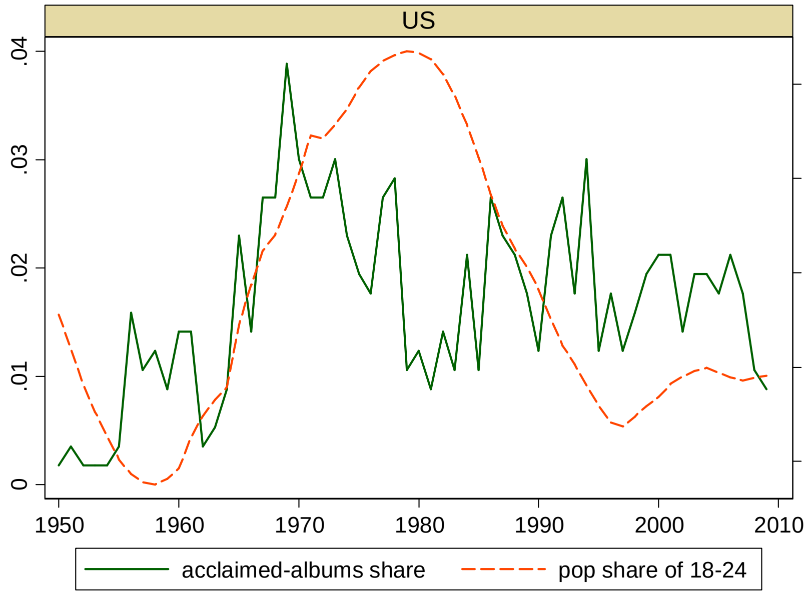


Table 3. The effect of GDP growth and demographics on the quality of music in the US

	(full sample)	(1970-2009)
GDP growth	-0.0157	0.0978**
	(0.0477)	(0.0374)
Pop share of 18-24	0.240**	-0.108
	(0.0903)	(0.0777)
Observations	59	39
R-squared	0.157	0.117

Dependant variable is share of amazing albums..
Robust standard errors in parentheses, ** p<0.05.

What about the quality of movies?

To check whether movie quality is also associated with GDP growth, I use the "[They Shoot Pictures, Don't They?]" database of the 1000 greatest films of all times, as voted by 2,138 critics, filmmakers, reviewers, scholars and other likely film types. 468 of them, released between 1915 and 2007, are from the US. I focus on movies released after 1940 to enhance comparability. This leaves me with 387 amazing US movies. I find a positive and significant effect of growth on the quality of movies (table 5), suggesting not only music but also movies are better in good times.

Table 5. The effect of GDP growth on the quality of movies in the US

	(1)	(2)	(3)
GDP growth	0.0520		
	(0.0324)		
lagged GDP growth		0.0783**	
		(0.0381)	
5-year moving average			0.122***
			(0.0229)
Observations	56	55	60
R-squared	0.031	0.071	0.299

Dependant variable is share of amazing movies. Robust standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1.

Conclusion

GDP growth matters for the composition of masterpieces.

References

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