



# **File-Sharing: What do we Know?**

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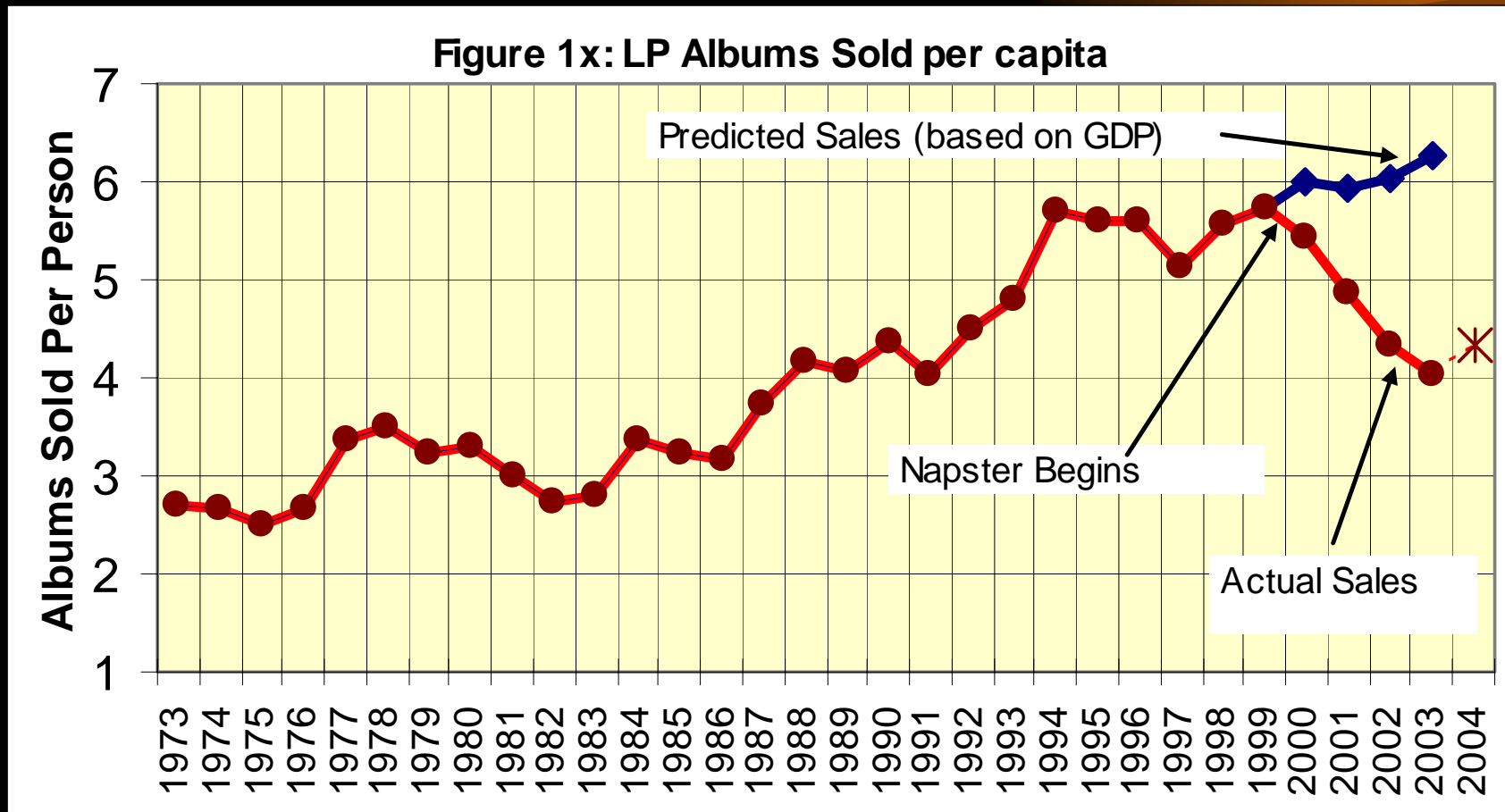
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**For Details Go to**

**[http://www.utdallas.edu/~liebowit/intprop/  
main.htm](http://www.utdallas.edu/~liebowit/intprop/main.htm)**

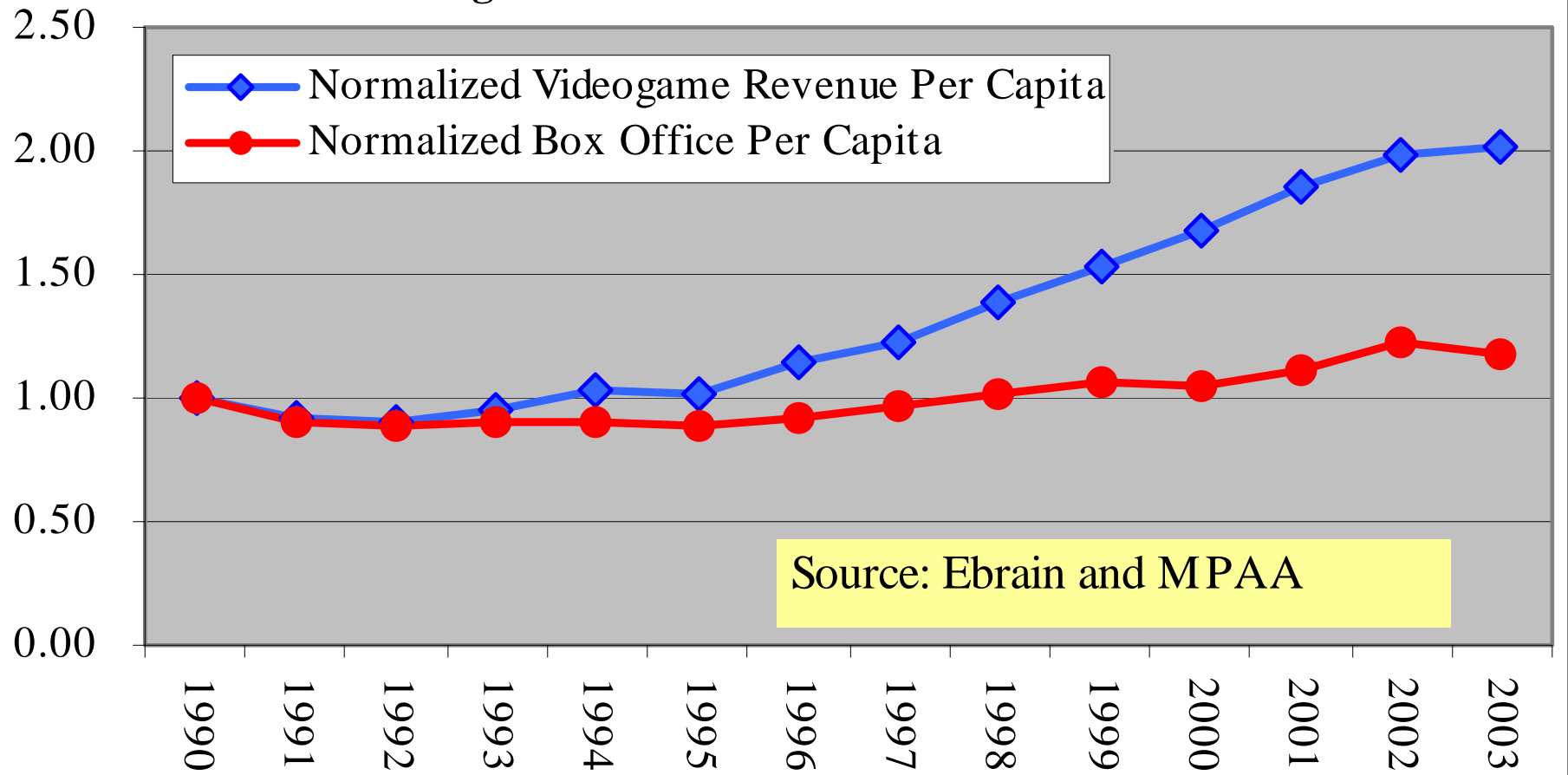
# What has happened to Record Sales



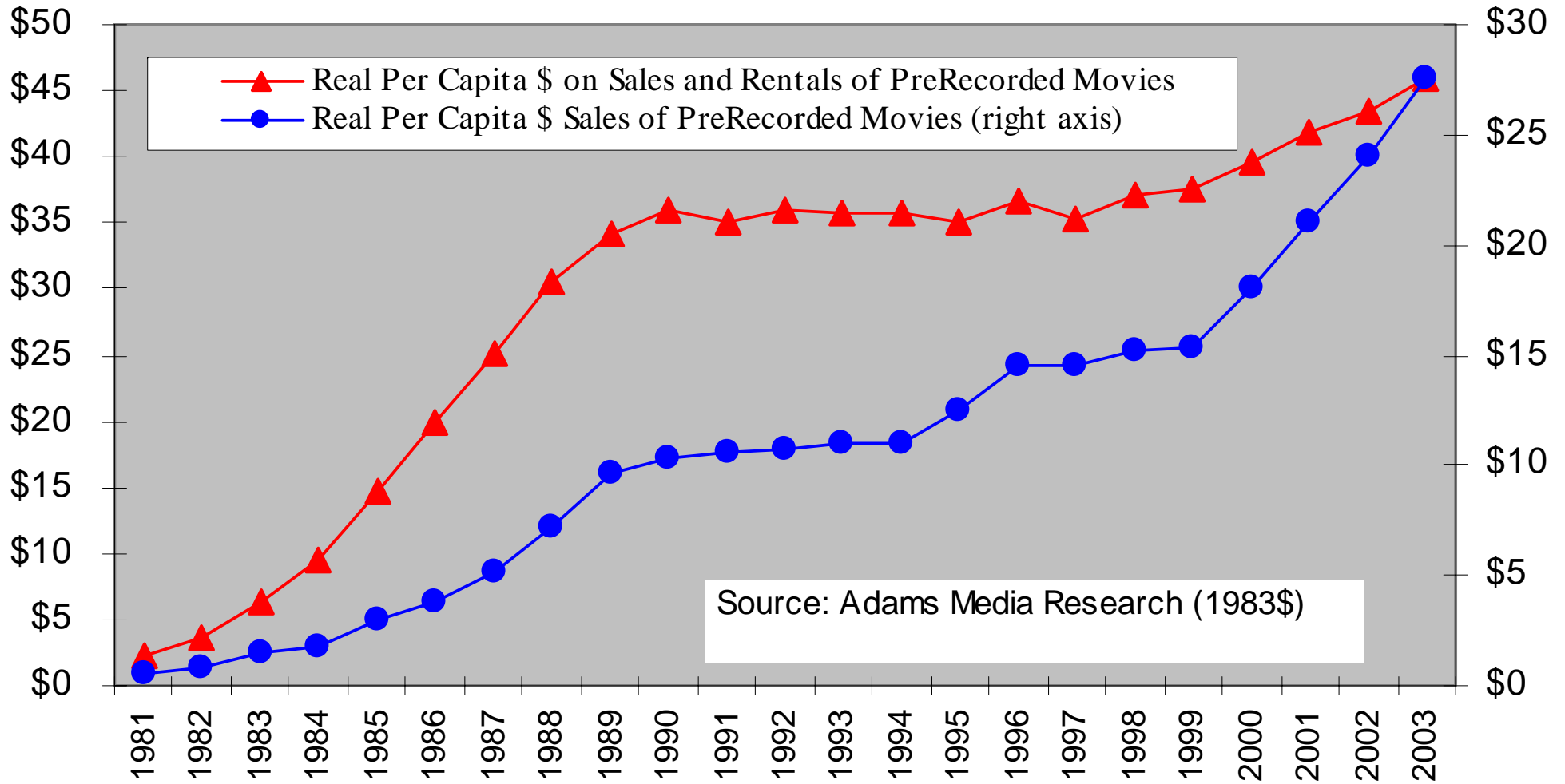
# *Why blame file-sharing?*

- Theory supports a view that file-sharing will hurt record sales.
- With the introduction of Napster the growth and maturation of file-sharing occurs in a very short period of time. The rapid and large change provides a powerful test.
- This emergence of file-sharing coincides with the decline in sales.
- Other Alternatives are not consistent with the decline
  - GDP
  - Price of CDs
  - Quality of music
  - Alternative forms of entertainment (DVDs) and so forth.

**Figure 2: Movies and VideoGames**



**Figure 4: Growth in Pre-Recorded Movie Sales and Rentals**



# Additional Evidence

- Why did Sales turn up in the First half of this year?
  - Answer: File-sharing declined.

Table 3: Estimated Change in File Sharing, first half of 2003 to first half 2004

|               |        |
|---------------|--------|
| Big Champagne | -4.4%  |
| ComScore      | -36.3% |
| PEW           | -28.8% |

- Records stay on sales charts for a shorter period since file-sharing began. Consistent with substitution (harm) hypothesis, not with sampling.

“Modeling Product Lifecycle on a Ranked List: An Application to Music Albums on Billboard Charts” Bhattacharjee, Gopal, Lertwachara, Marsden.

## *Conclusion:*

- No reason to believe that the decline is due to anything but file-sharing.

# *Regression Results*

- Blackburn (Harvard Dissertation) finds large decline. CDs as unit of analysis.
- Hong (Stanford dissertation): file-sharing accounts for a large minority of sales decline.
- Liebowitz, using cities as unit of analysis finds file-sharing decreases sales by large amount.
- Peitz and Waelbroeck: file-sharing decreases CD sales; cross section country analysis.
- Rob and Waldfogel: File-sharing decreases sales (Each 2 downloads turn into a lost sale) based on survey of student behavior
- Zentner (Chicago Dissertation): file-sharing decreases CD sales; cross section country analysis.
- Oberholzer and Strumpf : file-sharing has + impact; CDs as unit of analysis.