

The background of the slide features a large, semi-transparent watermark of the Rutgers Business School seal. The seal is circular and contains the text 'RUTGERS STATE UNIVERSITY' around the perimeter and 'BUSINESS SCHOOL' in the center. The seal is rendered in a light red color, matching the overall theme of the slide.

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Newark and New Brunswick

Where does the value added in XBRL come from?

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What is the source of value added in XBRL?

- As XBRL becomes part of the infrastructure of the financial reporting environment it is important to understand what its impact has been and how it has fared with respect to expectations.
- Mixed academic evidence on how markets react to XBRL tagged financial statements.
- A key problem is that its introduction into the USA coincided with the start of the 2008/2009 Great Recession—the mother of all confounding events.
- Given that, lets go back and consider what we said about how XBRL will add value.

XBRL as a transaction facilitator

- XBRL seen as a means of “bridging the gap” when accounting information passes between the business and other stakeholders.
- Liv Watson, 2012:
“Bar Code” for Business Information
 - Adds structure (meaning) to company disclosures
 - Enhances information processing, reuse, analysis and reporting
 - Disclosure neutral



XBRL adds value as a medium of information transfer

- This is what XBRL.ORG says that XBRL is all about:
- *In a nutshell, XBRL provides a language in which reporting terms can be authoritatively defined. Those terms can then be used to uniquely represent the contents of financial statements or other kinds of compliance, performance and business reports. XBRL lets reporting information **move between organizations** rapidly, accurately and digitally.*
<https://www.xbrl.org/the-standard/what/an-introduction-to-xbrl/>
- However, they then go on to make much more sweeping arguments about the value added that XBRL provides.

XBRL.ORG now has a wider vision

- *The change from paper, PDF and HTML based reports to XBRL ones is a little bit like the change from film photography to digital photography, or from paper maps to digital maps. The new format allows **you** to do all the things that used to be possible, but also opens up a range of new capabilities because the information is clearly defined, platform-independent, testable and digital. Just like digital maps, digital business reports, in XBRL format, simplify the way that people can use, share, analyze and add value to the data. <https://www.xbrl.org/the-standard/what/an-introduction-to-xbrl/>*
- Is this really accurate? Who is the “you” w.r.t. XBRL?

XBRL similar to digital photography?

- This analogy assumes that before digital cameras there was no way to communicate images except as hard copy.
- However, wire photo services were in use in the 1930s. The real value of digital photographs is not just that they are digital, but the removal of the constraints of film rolls and developing labs.
- They also facilitate image manipulation—not exactly a selling point for XBRL!
- The killer app for GPS is providing directions, not simply digitizing paper maps, while for digital photos it is immediacy. What are the XBRL equivalents?

An even bolder claim

- *Just as the standardized shipping container transformed global supply chains for goods, the standardization of reporting concepts creates large and sometimes unexpected **efficiencies in the business reporting supply chain.***

<https://www.xbrl.org/the-standard/what/an-introduction-to-xbrl/>



XBRL similar to containerization?

- The value added of the container was not just that it facilitated the loading and unloading of cargo ships.
- The whole point of containerization is the enabling of intermodal freight transport.
- Containers both drove and demanded a standardization of every aspect of the freight movement infrastructure, from the design of ships, trains and trucks, to changing the way that cranes operated.
- Is there anything like this happening with XBRL?
- If not, why not? What is the *business reporting supply chain* and what *efficiencies* can there be in it?

Limitations on the value added capability of XBRL

- Unlike with inter/intra national trade, the supply chain of digital financial information is relatively short and encompasses fewer players.
- There is not usually a long chain from the digitization of financial statements to their consumption by the end user.
- For example, an analyst or investor extracts a 10K, analyses its data and then makes a decision. There is no reason for this party to transmit the XBRL information any further, unlike with a shipping container in a global supply chain.
- SBR is a better example of one to one to many.

XBRL reminds me of this technology

- The old fashioned business card reader:
 - These are being replaced by apps for smartphones that essentially use AI for optical character recognition. Of course, these all work because of a universally accepted, albeit informal, taxonomy for card content.
 - If we had waited, would a similar optical OCR technology have replaced the functions of XBRL?
 - If not, why not? Raises the question of whether XBRL is the same as digitization of data.



Tag vs Tag attributes

- Is the source of value added in XBRL the digitization of financial data, or the fact that someone manually chooses the tags and their content?
- Many research papers examine the market impact of the human input into XBRL tagging: the choice of accounting concepts, the number of tags used and especially the number of extensions.
- Use of taxonomy extensions is by definition a non-automatable aspect of XBRL.
- If that is the main driver of the market impact of XBRL what does that say about the value added of XBRL?

Magnitude of value added from digitization

- Ultimately, all the point behind all these comparisons and arguments come down the value of digitizing financial statement data.
- Clearly there has to be some value, especially in aggregate to society, but how much can it be?
- The benchmark is not to paper statements but to one whose data is manually entered into a computer.
- For any one party that is a one-shot source of value. If communication ends with that party there is no additional value to be gained as happens in a chain.
- Some research papers make implausibly large claims as to what pure digitization is worth.

Understand the context of XBRL value added

- Either see XBRL as simply another tagging methodology and expand its role outwards from financial reporting to SBR and Big Data. Or,
- Return XBRL to the context of the Business Reporting Supply Chain and understand the scope and scale of possible value added that it can provide in it.
- Distinguish between the value added from digitization and the value gained from the manual input into the tagging process.
- Photos and maps differ depending on who creates them, even when they are digital. Even more so in the case of tagging financial statements.

Conclusion

- As XBRL becomes an infrastructure, academic research is inevitably shifting from positive to normative: from how to make XBRL better to taking XBRL as a given and seeing what difference it made.
- The problem with this shift is that positive research is being now being done by capital market researchers who don't think about the technological and social context of tagging. They see it simply as another event for an event study.
- A lot of things add value in aggregate but cannot be measured in a particular instance—for example, social interactions. We should not be afraid of this possibility.